

SEQUENCE LISTING

<110> UCB, S.A.
 LYNCH, Berkley
 NOCKA, Karl
 FUKS, Bruno

<120> Methods for the identification of agents for the treatment of seizures, neurological diseases, endocrinopathies and hormonal diseases

<130> 53529-5007-01-WO

<150> US 60/430,372
 <151> 2002-12-03

<150> US 60/506,764
 <151> 2003-09-30

<160> 16

<170> PatentIn version 3.1

<210> 1
 <211> 2229
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(2229)
 <223>

<400> 1
 atg gaa gag ggc ttc cga gac cgg gca gct ttc atc cgt ggg gcc aaa 48
 Met Glu Glu Gly Phe Arg Asp Arg Ala Ala Phe Ile Arg Gly Ala Lys
 1 5 10 15

gac att gct aag gaa gtc aaa aag cat gcg gcc aag aag gtg gtg aag 96
 Asp Ile Ala Lys Glu Val Lys Lys His Ala Ala Lys Lys Val Val Lys
 20 25 30

ggc ctg gac aga gtc cag gac gaa tat tcc cga aga tcg tac tcc cgc 144
 Gly Leu Asp Arg Val Gln Asp Glu Tyr Ser Arg Arg Ser Tyr Ser Arg
 35 40 45

ttt gag gag gag gat gat gat gat gac ttc cct gct ccc agt gat ggt 192
 Phe Glu Glu Glu Asp Asp Asp Asp Phe Pro Ala Pro Ser Asp Gly
 50 55 60

tat tac cga gga gaa ggg acc cag gat gag gag gaa ggt ggt gca tcc 240
 Tyr Tyr Arg Gly Glu Gly Thr Gln Asp Glu Glu Glu Gly Gly Ala Ser
 65 70 75 80

agt gat gct act gag ggc cat gac gag gat gat gag atc tat gaa ggg 288
 Ser Asp Ala Thr Glu Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly
 85 90 95

gaa tat cag ggc att ccc cgg gca gag tct ggg ggc aaa ggc gag cgg 336
 Glu Tyr Gln Gly Ile Pro Arg Ala Glu Ser Gly Gly Lys Gly Glu Arg
 100 105 110

atg gca gat ggg gcg ccc ctg gct gga gta agg ggg ggc ttg agt gat	384
Met Ala Asp Gly Ala Pro Leu Ala Gly Val Arg Gly Gly Leu Ser Asp	
115 120 125	
ggg gag ggt ccc cct ggg ggc cgg ggg gag gca caa cga cgg aaa gaa	432
Gly Glu Gly Pro Pro Gly Gly Arg Gly Glu Ala Gln Arg Arg Lys Glu	
130 135 140	
cga gaa gaa ctg gcc caa cag tat gaa gcc atc cta cgg gag tgt ggc	480
Arg Glu Glu Leu Ala Gln Gln Tyr Glu Ala Ile Leu Arg Glu Cys Gly	
145 150 155 160	
cac ggc cgc ttc cag tgg aca ctg tat ttt gtg ctt ggt ctg gcg ctg	528
His Gly Arg Phe Gln Trp Thr Leu Tyr Phe Val Leu Gly Leu Ala Leu	
165 170 175	
atg gct gac ggt gtg gag gtc ttt gtg gtg ggc ttc gtg ctg ccc agc	576
Met Ala Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu Pro Ser	
180 185 190	
gct gag aaa gac atg tgc ctg tcc gac tcc aac aaa ggc atg cta ggc	624
Ala Glu Lys Asp Met Cys Leu Ser Asp Ser Asn Lys Gly Met Leu Gly	
195 200 205	
ctc atc gtc tac ctg ggc atg atg gtg gga gcc ttc ctc tgg gga ggt	672
Leu Ile Val Tyr Leu Gly Met Met Val Gly Ala Phe Leu Trp Gly Gly	
210 215 220	
ctg gct gac cgg ctg ggt cgg agg cag tgt ctg ctc atc tcg ctc tca	720
Leu Ala Asp Arg Leu Gly Arg Arg Gln Cys Leu Leu Ile Ser Leu Ser	
225 230 235 240	
gtc aac agc gtc ttc gcc ttc ttc tca tct ttt gtc cag ggt tac ggc	768
Val Asn Ser Val Phe Ala Phe Phe Ser Ser Phe Val Gln Gly Tyr Gly	
245 250 255	
act ttc ctc ttc tgc cgc cta ctt tct ggg gtt ggg att gga ggg tcc	816
Thr Phe Leu Phe Cys Arg Leu Leu Ser Gly Val Gly Ile Gly Ser	
260 265 270	
atc ccc att gtc ttc tcc tat ttc tcc gag ttt ctg gcc cag gag aaa	864
Ile Pro Ile Val Phe Ser Tyr Phe Ser Glu Phe Leu Ala Gln Glu Lys	
275 280 285	
cga ggg gag cat ttg agc tgg ctc tgc atg ttt tgg atg att ggt ggc	912
Arg Gly Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile Gly Gly	
290 295 300	
gtg tac gca gct gct atg gcc tgg gcc atc atc ccc cac tat ggg tgg	960
Val Tyr Ala Ala Ala Met Ala Trp Ala Ile Ile Pro His Tyr Gly Trp	
305 310 315 320	
agt ttt cag atg ggt tct gcc tac cag ttc cac agc tgg agg gtc ttc	1008
Ser Phe Gln Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg Val Phe	
325 330 335	
gtc ctc gtc tgc gcc ttt cct tct gtg ttt gcc att ggg gct ctg acc	1056
Val Leu Val Cys Ala Phe Pro Ser Val Phe Ala Ile Gly Ala Leu Thr	
340 345 350	

acg cag cct gag agc ccc cgt ttc ttc cta gag aat gga aag cat gat	1104
Thr Gln Pro Glu Ser Pro Arg Phe Phe Leu Glu Asn Gly Lys His Asp	
355 360 365	
gag gcc tgg atg gtg ctg aag cag gtc cat gat acc aac atg cga gcc	1152
Glu Ala Trp Met Val Leu Lys Gln Val His Asp Thr Asn Met Arg Ala	
370 375 380	
aaa gga cat cct gag cga gtg ttc tca gta acc cac att aag acg att	1200
Lys Gly His Pro Glu Arg Val Phe Ser Val Thr His Ile Lys Thr Ile	
385 390 395 400	
cat cag gag gat gaa ttg att gag atc cag tgc gac aca ggg acc tgg	1248
His Gln Glu Asp Glu Leu Ile Glu Ile Gln Ser Asp Thr Gly Thr Trp	
405 410 415	
tac cag cgc tgg ggg gtc cgg gcc ttg agc cta ggg ggg cag gtt tgg	1296
Tyr Gln Arg Trp Gly Val Arg Ala Leu Ser Leu Gly Gly Gln Val Trp	
420 425 430	
ggg aat ttt ctc tcc tgt ttt ggt ccc gaa tat cgg cgc atc act ctg	1344
Gly Asn Phe Leu Ser Cys Phe Gly Pro Glu Tyr Arg Arg Ile Thr Leu	
435 440 445	
atg atg atg ggt gtg tgg ttc acc atg tca ttc agc tac tat ggc ctg	1392
Met Met Met Gly Val Trp Phe Thr Met Ser Phe Ser Tyr Tyr Gly Leu	
450 455 460	
acc gtc tgg ttt cct gac atg atc cgc cat ctc cag gca gtg gac tac	1440
Thr Val Trp Phe Pro Asp Met Ile Arg His Leu Gln Ala Val Asp Tyr	
465 470 475 480	
gca tcc cgc acc aaa gtg ttc ccc ggg gag cgc gta gag cat gta act	1488
Ala Ser Arg Thr Lys Val Phe Pro Gly Glu Arg Val Glu His Val Thr	
485 490 495	
ttt aac ttc acg ttg gag aat cag atc cac cga ggc ggg cag tac ttc	1536
Phe Asn Phe Thr Leu Glu Asn Gln Ile His Arg Gly Gly Gln Tyr Phe	
500 505 510	
aat gac aag ttc att ggg ctg cgg ctc aag tca gtg tcc ttt gag gat	1584
Asn Asp Lys Phe Ile Gly Leu Arg Leu Lys Ser Val Ser Phe Glu Asp	
515 520 525	
tcc ctg ttt gaa gag tgt tat ttt gag gat gtc aca tcc agc aac acg	1632
Ser Leu Phe Glu Glu Cys Tyr Phe Glu Asp Val Thr Ser Ser Asn Thr	
530 535 540	
ttt ttc cgc aac tgc aca ttc atc aac act gtg ttc tat aac act gac	1680
Phe Phe Arg Asn Cys Thr Phe Ile Asn Thr Val Phe Tyr Asn Thr Asp	
545 550 555 560	
ctg ttc gag tac aag ttt gtg aac agc cgt ctg ata aac agt aca ttc	1728
Leu Phe Glu Tyr Lys Phe Val Asn Ser Arg Leu Ile Asn Ser Thr Phe	
565 570 575	
ctg cac aac aag gag ggc tgc ccg cta gac gtg aca ggg acg ggc gaa	1776
Leu His Asn Lys Glu Gly Cys Pro Leu Asp Val Thr Gly Thr Gly Glu	
580 585 590	
ggt gcc tac atg gta tac ttt gtg agc ttc ctg ggg aca ctg gca gtg	1824

Gly	Ala	Tyr	Met	Val	Tyr	Phe	Val	Ser	Phe	Leu	Gly	Thr	Leu	Ala	Val		
	595						600					605					
ctt	cct	ggg	aat	atc	gtg	tct	gcc	ctg	ctc	atg	gac	aag	atc	ggc	agg	1872	
Leu	Pro	Gly	Asn	Ile	Val	Ser	Ala	Leu	Leu	Met	Asp	Lys	Ile	Gly	Arg		
	610					615					620						
ctc	aga	atg	ctt	gct	ggc	tcc	agc	gtg	atg	tcc	tgt	gtc	tcc	tgc	ttc	1920	
Leu	Arg	Met	Leu	Ala	Gly	Ser	Ser	Val	Met	Ser	Cys	Val	Ser	Cys	Phe		
	625				630					635					640		
ttc	ctg	tct	ttt	ggg	aac	agt	gag	tcg	gcc	atg	atc	gct	ctg	ctc	tgc	1968	
Phe	Leu	Ser	Phe	Gly	Asn	Ser	Glu	Ser	Ala	Met	Ile	Ala	Leu	Leu	Cys		
				645					650						655		
ctt	ttt	ggc	ggg	gtc	agc	att	gca	tcc	tgg	aat	gcg	ctg	gac	gtg	ttg	2016	
Leu	Phe	Gly	Gly	Val	Ser	Ile	Ala	Ser	Trp	Asn	Ala	Leu	Asp	Val	Leu		
			660					665					670				
act	gtt	gaa	ctc	tac	ccc	tca	gac	aag	agg	acc	aca	gct	ttt	ggc	ttc	2064	
Thr	Val	Glu	Leu	Tyr	Pro	Ser	Asp	Lys	Arg	Thr	Thr	Ala	Phe	Gly	Phe		
		675					680					685					
ctg	aat	gcc	ctg	tgt	aag	ctg	gca	gct	gtg	ctg	ggg	atc	agc	atc	ttc	2112	
Leu	Asn	Ala	Leu	Cys	Lys	Leu	Ala	Ala	Val	Leu	Gly	Ile	Ser	Ile	Phe		
	690					695					700						
aca	tcc	ttc	gtg	gga	atc	acc	aag	gct	gca	ccc	atc	ctc	ttt	gcc	tca	2160	
Thr	Ser	Phe	Val	Gly	Ile	Thr	Lys	Ala	Ala	Pro	Ile	Leu	Phe	Ala	Ser		
	705				710					715					720		
gct	gcc	ctt	gcc	ctt	ggc	agc	tct	ctg	gcc	ctg	aag	ctg	cct	gag	acc	2208	
Ala	Ala	Leu	Ala	Leu	Gly	Ser	Ser	Leu	Ala	Leu	Lys	Leu	Pro	Glu	Thr		
				725					730					735			
cgg	ggg	cag	gtg	ctg	cag	tga										2229	
Arg	Gly	Gln	Val	Leu	Gln												
			740														
<210> 2																	
<211> 742																	
<212> PRT																	
<213> Homo sapiens																	
<400> 2																	
Met	Glu	Glu	Gly	Phe	Arg	Asp	Arg	Ala	Ala	Phe	Ile	Arg	Gly	Ala	Lys		
1				5				10						15			
Asp	Ile	Ala	Lys	Glu	Val	Lys	Lys	His	Ala	Ala	Lys	Lys	Val	Val	Lys		
		20						25					30				
Gly	Leu	Asp	Arg	Val	Gln	Asp	Glu	Tyr	Ser	Arg	Arg	Ser	Tyr	Ser	Arg		
		35					40					45					
Phe	Glu	Glu	Glu	Asp	Asp	Asp	Asp	Phe	Pro	Ala	Pro	Ser	Asp	Gly			
	50				55					60							
Tyr	Tyr	Arg	Gly	Glu	Gly	Thr	Gln	Asp	Glu	Glu	Glu	Gly	Gly	Ala	Ser		
65					70					75					80		

Ser Asp Ala Thr Glu Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly
 85 90 95
 Glu Tyr Gln Gly Ile Pro Arg Ala Glu Ser Gly Gly Lys Gly Glu Arg
 100 105 110
 Met Ala Asp Gly Ala Pro Leu Ala Gly Val Arg Gly Gly Leu Ser Asp
 115 120 125
 Gly Glu Gly Pro Pro Gly Gly Arg Gly Glu Ala Gln Arg Arg Lys Glu
 130 135 140
 Arg Glu Glu Leu Ala Gln Gln Tyr Glu Ala Ile Leu Arg Glu Cys Gly
 145 150 155 160
 His Gly Arg Phe Gln Trp Thr Leu Tyr Phe Val Leu Gly Leu Ala Leu
 165 170 175
 Met Ala Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu Pro Ser
 180 185 190
 Ala Glu Lys Asp Met Cys Leu Ser Asp Ser Asn Lys Gly Met Leu Gly
 195 200 205
 Leu Ile Val Tyr Leu Gly Met Met Val Gly Ala Phe Leu Trp Gly Gly
 210 215 220
 Leu Ala Asp Arg Leu Gly Arg Arg Gln Cys Leu Leu Ile Ser Leu Ser
 225 230 235 240
 Val Asn Ser Val Phe Ala Phe Phe Ser Ser Phe Val Gln Gly Tyr Gly
 245 250 255
 Thr Phe Leu Phe Cys Arg Leu Leu Ser Gly Val Gly Ile Gly Gly Ser
 260 265 270
 Ile Pro Ile Val Phe Ser Tyr Phe Ser Glu Phe Leu Ala Gln Glu Lys
 275 280 285
 Arg Gly Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile Gly Gly
 290 295 300
 Val Tyr Ala Ala Ala Met Ala Trp Ala Ile Ile Pro His Tyr Gly Trp
 305 310 315 320
 Ser Phe Gln Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg Val Phe
 325 330 335
 Val Leu Val Cys Ala Phe Pro Ser Val Phe Ala Ile Gly Ala Leu Thr
 340 345 350
 Thr Gln Pro Glu Ser Pro Arg Phe Phe Leu Glu Asn Gly Lys His Asp
 355 360 365
 Glu Ala Trp Met Val Leu Lys Gln Val His Asp Thr Asn Met Arg Ala
 370 375 380
 Lys Gly His Pro Glu Arg Val Phe Ser Val Thr His Ile Lys Thr Ile
 385 390 395 400
 His Gln Glu Asp Glu Leu Ile Glu Ile Gln Ser Asp Thr Gly Thr Trp

405	410	415
Tyr Gln Arg Trp Gly Val Arg Ala Leu Ser Leu Gly Gly Gln Val Trp		
420	425	430
Gly Asn Phe Leu Ser Cys Phe Gly Pro Glu Tyr Arg Arg Ile Thr Leu		
435	440	445
Met Met Met Gly Val Trp Phe Thr Met Ser Phe Ser Tyr Tyr Gly Leu		
450	455	460
Thr Val Trp Phe Pro Asp Met Ile Arg His Leu Gln Ala Val Asp Tyr		
465	470	475
Ala Ser Arg Thr Lys Val Phe Pro Gly Glu Arg Val Glu His Val Thr		
485	490	495
Phe Asn Phe Thr Leu Glu Asn Gln Ile His Arg Gly Gly Gln Tyr Phe		
500	505	510
Asn Asp Lys Phe Ile Gly Leu Arg Leu Lys Ser Val Ser Phe Glu Asp		
515	520	525
Ser Leu Phe Glu Glu Cys Tyr Phe Glu Asp Val Thr Ser Ser Asn Thr		
530	535	540
Phe Phe Arg Asn Cys Thr Phe Ile Asn Thr Val Phe Tyr Asn Thr Asp		
545	550	555
Leu Phe Glu Tyr Lys Phe Val Asn Ser Arg Leu Ile Asn Ser Thr Phe		
565	570	575
Leu His Asn Lys Glu Gly Cys Pro Leu Asp Val Thr Gly Thr Gly Glu		
580	585	590
Gly Ala Tyr Met Val Tyr Phe Val Ser Phe Leu Gly Thr Leu Ala Val		
595	600	605
Leu Pro Gly Asn Ile Val Ser Ala Leu Leu Met Asp Lys Ile Gly Arg		
610	615	620
Leu Arg Met Leu Ala Gly Ser Ser Val Met Ser Cys Val Ser Cys Phe		
625	630	635
Phe Leu Ser Phe Gly Asn Ser Glu Ser Ala Met Ile Ala Leu Leu Cys		
645	650	655
Leu Phe Gly Gly Val Ser Ile Ala Ser Trp Asn Ala Leu Asp Val Leu		
660	665	670
Thr Val Glu Leu Tyr Pro Ser Asp Lys Arg Thr Thr Ala Phe Gly Phe		
675	680	685
Leu Asn Ala Leu Cys Lys Leu Ala Ala Val Leu Gly Ile Ser Ile Phe		
690	695	700
Thr Ser Phe Val Gly Ile Thr Lys Ala Ala Pro Ile Leu Phe Ala Ser		
705	710	715
Ala Ala Leu Ala Leu Gly Ser Ser Leu Ala Leu Lys Leu Pro Glu Thr		
725	730	735

Arg Gly Gln Val Leu Gln
740

<210> 3
<211> 2052
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(2052)
<223>

<400> 3
atg gat gac tac aag tat cag gac aat tat ggg ggc tat gct ccc agt 48
Met Asp Asp Tyr Lys Tyr Gln Asp Asn Tyr Gly Gly Tyr Ala Pro Ser
1 5 10 15
gat ggc tat tac cgc ggc aat gag tcc aac cca gaa gaa gat gca cag 96
Asp Gly Tyr Tyr Arg Gly Asn Glu Ser Asn Pro Glu Glu Asp Ala Gln
20 25 30
agt gat gtc acc gaa ggc cat gat gag gaa gac gag atc tat gag ggc 144
Ser Asp Val Thr Glu Gly His Asp Glu Glu Asp Glu Ile Tyr Glu Gly
35 40 45
gag tac cag ggt atc cct cac cca gat gat gtc aag gcc aag cag gcc 192
Glu Tyr Gln Gly Ile Pro His Pro Asp Asp Val Lys Ala Lys Gln Ala
50 55 60
aag atg gcg ccc tcc aga atg gac agc ctt cgg ggc cag aca gac ctg 240
Lys Met Ala Pro Ser Arg Met Asp Ser Leu Arg Gly Gln Thr Asp Leu
65 70 75 80
atg gct gag agg ctg gaa gat gag gag cag ttg gcc cac cag tac gag 288
Met Ala Glu Arg Leu Glu Asp Glu Glu Gln Leu Ala His Gln Tyr Glu
85 90 95
acc atc atg gat gag tgt ggc cat ggc cgc ttc cag tgg atc ctc ttt 336
Thr Ile Met Asp Glu Cys Gly His Gly Arg Phe Gln Trp Ile Leu Phe
100 105 110
ttc gtc ttg ggt ttg gcc ctg atg gcc gat ggg gtg gaa gtg ttc gtg 384
Phe Val Leu Gly Leu Ala Leu Met Ala Asp Gly Val Glu Val Phe Val
115 120 125
gtg agt ttt gcc ctg ccc agt gca gag aag gac atg tgt ctg tcc agt 432
Val Ser Phe Ala Leu Pro Ser Ala Glu Lys Asp Met Cys Leu Ser Ser
130 135 140
tcc aaa aaa gga atg cta ggg atg ata gtc tac ttg gga atg atg gcg 480
Ser Lys Lys Gly Met Leu Gly Met Ile Val Tyr Leu Gly Met Met Ala
145 150 155 160
ggc gcc ttc atc ctg gga ggc ctg gct gat aag ctg gga agg aag cga 528
Gly Ala Phe Ile Leu Gly Gly Leu Ala Asp Lys Leu Gly Arg Lys Arg
165 170 175
gtc ctc agc atg tct ctg gcc gtc aat gcc tcc ttc gcc tcc ctc tct 576

Val	Leu	Ser	Met	Ser	Leu	Ala	Val	Asn	Ala	Ser	Phe	Ala	Ser	Leu	Ser		
			180					185					190				
tcc	ttc	gtg	cag	gga	tat	gga	gcc	ttc	ctc	ttc	tgc	cga	ctc	atc	tca		624
Ser	Phe	Val	Gln	Gly	Tyr	Gly	Ala	Phe	Leu	Phe	Cys	Arg	Leu	Ile	Ser		
		195					200					205					
ggc	atc	ggg	att	ggg	ggg	gct	cta	cgc	att	gtt	ttt	gcc	tat	ttt	tct		672
Gly	Ile	Gly	Ile	Gly	Gly	Ala	Leu	Pro	Ile	Val	Phe	Ala	Tyr	Phe	Ser		
	210					215					220						
gaa	ttc	ttg	tct	cgg	gag	aag	cga	gga	gaa	cac	ctc	agt	tgg	ctg	ggc		720
Glu	Phe	Leu	Ser	Arg	Glu	Lys	Arg	Gly	Glu	His	Leu	Ser	Trp	Leu	Gly		
225					230					235					240		
atc	ttc	tgg	atg	act	ggg	ggc	ctg	tac	gca	tct	gcc	atg	gcc	tgg	agc		768
Ile	Phe	Trp	Met	Thr	Gly	Gly	Leu	Tyr	Ala	Ser	Ala	Met	Ala	Trp	Ser		
				245					250					255			
atc	atc	cca	cac	tat	ggc	tgg	ggc	ttc	agc	atg	ggg	acc	aat	tac	cac		816
Ile	Ile	Pro	His	Tyr	Gly	Trp	Gly	Phe	Ser	Met	Gly	Thr	Asn	Tyr	His		
			260					265					270				
ttc	cat	agc	tgg	aga	gtg	ttt	gtc	atc	gtc	tgt	gct	ctg	ccc	tgc	acc		864
Phe	His	Ser	Trp	Arg	Val	Phe	Val	Ile	Val	Cys	Ala	Leu	Pro	Cys	Thr		
		275					280					285					
gtg	tcc	atg	gtg	gcc	ctg	aag	ttc	atg	cca	gag	agc	cca	agg	ttt	ctg		912
Val	Ser	Met	Val	Ala	Leu	Lys	Phe	Met	Pro	Glu	Ser	Pro	Arg	Phe	Leu		
	290					295					300						
cta	gag	atg	ggc	aaa	cat	gat	gaa	gcc	tgg	atg	att	ctc	aag	caa	gtc		960
Leu	Glu	Met	Gly	Lys	His	Asp	Glu	Ala	Trp	Met	Ile	Leu	Lys	Gln	Val		
305					310					315					320		
cat	gac	acc	aac	atg	aga	gct	aag	ggg	acc	cca	gag	aaa	gtg	ttc	acg		1008
His	Asp	Thr	Asn	Met	Arg	Ala	Lys	Gly	Thr	Pro	Glu	Lys	Val	Phe	Thr		
				325					330					335			
gtt	tcc	aac	atc	aaa	act	ccc	aag	caa	atg	gat	gaa	ttc	att	gag	atc		1056
Val	Ser	Asn	Ile	Lys	Thr	Pro	Lys	Gln	Met	Asp	Glu	Phe	Ile	Glu	Ile		
			340					345					350				
caa	agt	tca	aca	gga	acc	tgg	tac	cag	cgc	tgg	ctg	gtc	aga	ttc	aag		1104
Gln	Ser	Ser	Thr	Gly	Thr	Trp	Tyr	Gln	Arg	Trp	Leu	Val	Arg	Phe	Lys		
		355					360					365					
acc	att	ttc	aag	cag	gtc	tgg	gat	aat	gcc	ctg	tac	tgt	gtg	atg	ggg		1152
Thr	Ile	Phe	Lys	Gln	Val	Trp	Asp	Asn	Ala	Leu	Tyr	Cys	Val	Met	Gly		
	370					375					380						
ccc	tac	aga	atg	aat	aca	ctg	att	ctg	gcc	gtg	gtt	tgg	ttt	gcc	atg		1200
Pro	Tyr	Arg	Met	Asn	Thr	Leu	Ile	Leu	Ala	Val	Val	Trp	Phe	Ala	Met		
385					390					395					400		
gca	ttc	agt	tac	tat	gga	ctg	aca	gtt	tgg	ttt	cct	gat	atg	atc	cgc		1248
Ala	Phe	Ser	Tyr	Tyr	Gly	Leu	Thr	Val	Trp	Phe	Pro	Asp	Met	Ile	Arg		
				405				410						415			
tat	ttt	caa	gat	gaa	gaa	tac	aag	tct	aaa	atg	aag	gtg	ttt	ttt	ggg		1296
Tyr	Phe	Gln	Asp	Glu	Glu	Tyr	Lys	Ser	Lys	Met	Lys	Val	Phe	Phe	Gly		

420	425	430	
gag cat gtg tac ggc gcc aca atc aac ttc acg atg gaa aat cag atc Glu His Val Tyr Gly Ala Thr Ile Asn Phe Thr Met Glu Asn Gln Ile 435 440 445			1344
cac caa cat ggg aaa ctt gtg aat gat aag ttc aca aga atg tac ttt His Gln His Gly Lys Leu Val Asn Asp Lys Phe Thr Arg Met Tyr Phe 450 455 460			1392
aaa cat gta ctc ttt gag gac aca ttc ttt gac gag tgc tat ttt gaa Lys His Val Leu Phe Glu Asp Thr Phe Phe Asp Glu Cys Tyr Phe Glu 465 470 475 480			1440
gac gta aca tca aca gat acc tac ttc aaa aat tgt acc att gaa tca Asp Val Thr Ser Thr Asp Thr Tyr Phe Lys Asn Cys Thr Ile Glu Ser 485 490 495			1488
acc atc ttt tac aac aca gac ctc tac gag cac aag ttc atc aac tgt Thr Ile Phe Tyr Asn Thr Asp Leu Tyr Glu His Lys Phe Ile Asn Cys 500 505 510			1536
cgg ttt atc aac tcc acc ttc ctg gag cag aag gag ggc tgc cac atg Arg Phe Ile Asn Ser Thr Phe Leu Glu Gln Lys Glu Gly Cys His Met 515 520 525			1584
gac ttg gag caa gat aat gac ttc ctg att tac ctc gtc agc ttc ctg Asp Leu Glu Gln Asp Asn Asp Phe Leu Ile Tyr Leu Val Ser Phe Leu 530 535 540			1632
ggc agc ctg tct gtc tta ccc ggg aac atc att tct gcc ctg ctc atg Gly Ser Leu Ser Val Leu Pro Gly Asn Ile Ile Ser Ala Leu Leu Met 545 550 555 560			1680
gat aga att gga agg ctc aag atg att ggt ggc tcc atg cta atc tct Asp Arg Ile Gly Arg Leu Lys Met Ile Gly Gly Ser Met Leu Ile Ser 565 570 575			1728
gca gtc tgc tgc ttc ttc ctg ttt ttt ggc aac agt gag tct gca atg Ala Val Cys Cys Phe Phe Leu Phe Phe Gly Asn Ser Glu Ser Ala Met 580 585 590			1776
atc ggc tgg cag tgc ctg ttc tgt ggg aca agc att gca gcc tgg aat Ile Gly Trp Gln Cys Leu Phe Cys Gly Thr Ser Ile Ala Ala Trp Asn 595 600 605			1824
gct ctg gat gtg atc aca gtg gag ctg tat ccc acc aac cag aga gca Ala Leu Asp Val Ile Thr Val Glu Leu Tyr Pro Thr Asn Gln Arg Ala 610 615 620			1872
aca gcc ttc ggc att ctc aat gga tta tgc aaa ttt ggc gcc atc ctg Thr Ala Phe Gly Ile Leu Asn Gly Leu Cys Lys Phe Gly Ala Ile Leu 625 630 635 640			1920
gga aac acc atc ttt gct tct ttt gtt ggg ata acc aaa gtg gtc ccc Gly Asn Thr Ile Phe Ala Ser Phe Val Gly Ile Thr Lys Val Val Pro 645 650 655			1968
atc ctt ctg gct gct gct tct ctg gtt ggg ggt ggc ctg att gcc ctt Ile Leu Leu Ala Ala Ala Ser Leu Val Gly Gly Gly Leu Ile Ala Leu 660 665 670			2016

cga ctg cca gag act cga gaa cag gtc ctg atg tga
 Arg Leu Pro Glu Thr Arg Glu Gln Val Leu Met
 675 680

2052

<210> 4
 <211> 683
 <212> PRT
 <213> Homo sapiens

<400> 4
 Met Asp Asp Tyr Lys Tyr Gln Asp Asn Tyr Gly Gly Tyr Ala Pro Ser
 1 5 10 15
 Asp Gly Tyr Tyr Arg Gly Asn Glu Ser Asn Pro Glu Glu Asp Ala Gln
 20 25 30
 Ser Asp Val Thr Glu Gly His Asp Glu Glu Asp Glu Ile Tyr Glu Gly
 35 40 45
 Glu Tyr Gln Gly Ile Pro His Pro Asp Asp Val Lys Ala Lys Gln Ala
 50 55 60
 Lys Met Ala Pro Ser Arg Met Asp Ser Leu Arg Gly Gln Thr Asp Leu
 65 70 75 80
 Met Ala Glu Arg Leu Glu Asp Glu Glu Gln Leu Ala His Gln Tyr Glu
 85 90 95
 Thr Ile Met Asp Glu Cys Gly His Gly Arg Phe Gln Trp Ile Leu Phe
 100 105 110
 Phe Val Leu Gly Leu Ala Leu Met Ala Asp Gly Val Glu Val Phe Val
 115 120 125
 Val Ser Phe Ala Leu Pro Ser Ala Glu Lys Asp Met Cys Leu Ser Ser
 130 135 140
 Ser Lys Lys Gly Met Leu Gly Met Ile Val Tyr Leu Gly Met Met Ala
 145 150 155 160
 Gly Ala Phe Ile Leu Gly Gly Leu Ala Asp Lys Leu Gly Arg Lys Arg
 165 170 175
 Val Leu Ser Met Ser Leu Ala Val Asn Ala Ser Phe Ala Ser Leu Ser
 180 185 190
 Ser Phe Val Gln Gly Tyr Gly Ala Phe Leu Phe Cys Arg Leu Ile Ser
 195 200 205
 Gly Ile Gly Ile Gly Gly Ala Leu Pro Ile Val Phe Ala Tyr Phe Ser
 210 215 220
 Glu Phe Leu Ser Arg Glu Lys Arg Gly Glu His Leu Ser Trp Leu Gly
 225 230 235 240
 Ile Phe Trp Met Thr Gly Gly Leu Tyr Ala Ser Ala Met Ala Trp Ser
 245 250 255
 Ile Ile Pro His Tyr Gly Trp Gly Phe Ser Met Gly Thr Asn Tyr His

260	265	270
Phe His Ser Trp Arg Val Phe Val Ile Val Cys Ala Leu Pro Cys Thr 275 280 285		
Val Ser Met Val Ala Leu Lys Phe Met Pro Glu Ser Pro Arg Phe Leu 290 295 300		
Leu Glu Met Gly Lys His Asp Glu Ala Trp Met Ile Leu Lys Gln Val 305 310 315 320		
His Asp Thr Asn Met Arg Ala Lys Gly Thr Pro Glu Lys Val Phe Thr 325 330 335		
Val Ser Asn Ile Lys Thr Pro Lys Gln Met Asp Glu Phe Ile Glu Ile 340 345 350		
Gln Ser Ser Thr Gly Thr Trp Tyr Gln Arg Trp Leu Val Arg Phe Lys 355 360 365		
Thr Ile Phe Lys Gln Val Trp Asp Asn Ala Leu Tyr Cys Val Met Gly 370 375 380		
Pro Tyr Arg Met Asn Thr Leu Ile Leu Ala Val Val Trp Phe Ala Met 385 390 395 400		
Ala Phe Ser Tyr Tyr Gly Leu Thr Val Trp Phe Pro Asp Met Ile Arg 405 410 415		
Tyr Phe Gln Asp Glu Glu Tyr Lys Ser Lys Met Lys Val Phe Phe Gly 420 425 430		
Glu His Val Tyr Gly Ala Thr Ile Asn Phe Thr Met Glu Asn Gln Ile 435 440 445		
His Gln His Gly Lys Leu Val Asn Asp Lys Phe Thr Arg Met Tyr Phe 450 455 460		
Lys His Val Leu Phe Glu Asp Thr Phe Phe Asp Glu Cys Tyr Phe Glu 465 470 475 480		
Asp Val Thr Ser Thr Asp Thr Tyr Phe Lys Asn Cys Thr Ile Glu Ser 485 490 495		
Thr Ile Phe Tyr Asn Thr Asp Leu Tyr Glu His Lys Phe Ile Asn Cys 500 505 510		
Arg Phe Ile Asn Ser Thr Phe Leu Glu Gln Lys Glu Gly Cys His Met 515 520 525		
Asp Leu Glu Gln Asp Asn Asp Phe Leu Ile Tyr Leu Val Ser Phe Leu 530 535 540		
Gly Ser Leu Ser Val Leu Pro Gly Asn Ile Ile Ser Ala Leu Leu Met 545 550 555 560		
Asp Arg Ile Gly Arg Leu Lys Met Ile Gly Gly Ser Met Leu Ile Ser 565 570 575		
Ala Val Cys Cys Phe Phe Leu Phe Phe Gly Asn Ser Glu Ser Ala Met 580 585 590		

Ile Gly Trp Gln Cys Leu Phe Cys Gly Thr Ser Ile Ala Ala Trp Asn
 595 600 605

Ala Leu Asp Val Ile Thr Val Glu Leu Tyr Pro Thr Asn Gln Arg Ala
 610 615 620

Thr Ala Phe Gly Ile Leu Asn Gly Leu Cys Lys Phe Gly Ala Ile Leu
 625 630 635 640

Gly Asn Thr Ile Phe Ala Ser Phe Val Gly Ile Thr Lys Val Val Pro
 645 650 655

Ile Leu Leu Ala Ala Ala Ser Leu Val Gly Gly Gly Leu Ile Ala Leu
 660 665 670

Arg Leu Pro Glu Thr Arg Glu Gln Val Leu Met
 675 680

<210> 5
 <211> 2184
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(2184)
 <223>

<400> 5
 atg gaa gac tct tac aag gat agg act tca ctg atg aag ggt gcc aag 48
 Met Glu Asp Ser Tyr Lys Asp Arg Thr Ser Leu Met Lys Gly Ala Lys
 1 5 10 15

gac att gcc aga gag gtg aag aaa caa aca gta aag aag gtg aat caa 96
 Asp Ile Ala Arg Glu Val Lys Lys Gln Thr Val Lys Lys Val Asn Gln
 20 25 30

gct gtg gac cga gcc cag gat gaa tac acc cag agg tcc tac agt cgg 144
 Ala Val Asp Arg Ala Gln Asp Glu Tyr Thr Gln Arg Ser Tyr Ser Arg
 35 40 45

ttc caa gat gaa gaa gat gat gat gac tac tac ccg gct gga gaa acc 192
 Phe Gln Asp Glu Glu Asp Asp Asp Asp Tyr Tyr Pro Ala Gly Glu Thr
 50 55 60

tat aat ggt gag gcc aac gat gac gaa ggc tca agt gaa gcc act gag 240
 Tyr Asn Gly Glu Ala Asn Asp Asp Glu Gly Ser Ser Glu Ala Thr Glu
 65 70 75 80

ggg cat gat gaa gat gat gag atc tat gag ggg gag tat cag ggc atc 288
 Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly Glu Tyr Gln Gly Ile
 85 90 95

ccc agt atg aac caa gcg aag gac agc atc gtg tca gtg ggg cag ccc 336
 Pro Ser Met Asn Gln Ala Lys Asp Ser Ile Val Ser Val Gly Gln Pro
 100 105 110

aag ggc gat gag tac aag gac cga cgg gag ctg gaa tca gaa agg aga 384
 Lys Gly Asp Glu Tyr Lys Asp Arg Arg Glu Leu Glu Ser Glu Arg Arg

115	120	125	
gct gac gag gaa gag tta gcc cag cag tat gag ctg ata atc caa gaa Ala Asp Glu Glu Glu Leu Ala Gln Gln Tyr Glu Leu Ile Ile Gln Glu 130 135 140			432
tgc ggt cat ggt cgt ttt cag tgg gcc ctt ttc ttc gtc ctg ggc atg Cys Gly His Gly Arg Phe Gln Trp Ala Leu Phe Phe Val Leu Gly Met 145 150 155 160			480
gct ctt atg gca gac ggt gta gag gtg ttt gtc gtt ggc ttc gtg tta Ala Leu Met Ala Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu 165 170 175			528
ccc agt gct gag aca gac ctc tgc atc cca aat tca gga tct gga tgg Pro Ser Ala Glu Thr Asp Leu Cys Ile Pro Asn Ser Gly Ser Gly Trp 180 185 190			576
cta ggc agc ata gtg tac ctc ggg atg atg gtg ggg gcg ttc ttc tgg Leu Gly Ser Ile Val Tyr Leu Gly Met Met Val Gly Ala Phe Phe Trp 195 200 205			624
gga gga ctg gca gac aaa gtg gga agg aaa cag tct ctt ctg att tgc Gly Gly Leu Ala Asp Lys Val Gly Arg Lys Gln Ser Leu Leu Ile Cys 210 215 220			672
atg tct gtc aac gga ttc ttt gcc ttc ctt tct tca ttt gtc caa ggt Met Ser Val Asn Gly Phe Phe Ala Phe Leu Ser Ser Phe Val Gln Gly 225 230 235 240			720
tat ggc ttc ttt ctc ttc tgt cgc tta ctt tct gga ttc ggg att gga Tyr Gly Phe Phe Leu Phe Cys Arg Leu Leu Ser Gly Phe Gly Ile Gly 245 250 255			768
gga gcc ata ccc act gtg ttc tcg tac ttt gct gaa gtc ctg gcc cgg Gly Ala Ile Pro Thr Val Phe Ser Tyr Phe Ala Glu Val Leu Ala Arg 260 265 270			816
gaa aag cgg ggc gaa cac ttg agc tgg ctc tgc atg ttc tgg atg atc Glu Lys Arg Gly Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile 275 280 285			864
ggg ggc atc tac gcc tct gcc atg gcc tgg gcc atc atc ccg cac tac Gly Gly Ile Tyr Ala Ser Ala Met Ala Trp Ala Ile Ile Pro His Tyr 290 295 300			912
ggg tgg agc ttc agc atg gga tcg gcc tac cag ttt cac agt tgg cgt Gly Trp Ser Phe Ser Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg 305 310 315 320			960
gtg ttt gtc atc gtc tgt gca ctc ccc tgt gtc tcc tcc gtg gtg gcc Val Phe Val Ile Val Cys Ala Leu Pro Cys Val Ser Ser Val Val Ala 325 330 335			1008
ctc aca ttc atg cct gaa agc cca cga ttc ttg ttg gag gtt gga aaa Leu Thr Phe Met Pro Glu Ser Pro Arg Phe Leu Leu Glu Val Gly Lys 340 345 350			1056
cat gat gaa gct tgg atg att ctg aag tta att cat gac acc aac atg His Asp Glu Ala Trp Met Ile Leu Lys Leu Ile His Asp Thr Asn Met 355 360 365			1104

aga gcc cgg ggt cag cct gag aag gtc ttc acg gta aac aaa ata aaa	1152
Arg Ala Arg Gly Gln Pro Glu Lys Val Phe Thr Val Asn Lys Ile Lys	
370 375 380	
act cct aaa caa ata gat gag ctg att gaa att gag agt gac aca gga	1200
Thr Pro Lys Gln Ile Asp Glu Leu Ile Glu Ile Glu Ser Asp Thr Gly	
385 390 395 400	
aca tgg tat agg agg tgt ttt gtt cgg atc cgc acc gag ctg tac gga	1248
Thr Trp Tyr Arg Arg Cys Phe Val Arg Ile Arg Thr Glu Leu Tyr Gly	
405 410 415	
att tgg ttg act ttt atg aga tgt ttc aac tac cca gtc agg gat aat	1296
Ile Trp Leu Thr Phe Met Arg Cys Phe Asn Tyr Pro Val Arg Asp Asn	
420 425 430	
aca ata aag ctt aca att gtt tgg ttc acc ctg tcc ttt ggg tac tat	1344
Thr Ile Lys Leu Thr Ile Val Trp Phe Thr Leu Ser Phe Gly Tyr Tyr	
435 440 445	
gga tta tcc gtt tgg ttc cct gat gtc att aaa cct ctg cag tcc gat	1392
Gly Leu Ser Val Trp Phe Pro Asp Val Ile Lys Pro Leu Gln Ser Asp	
450 455 460	
gaa tat gca ttg cta acc aga aat gtg gag aga gat aaa tat gca aat	1440
Glu Tyr Ala Leu Leu Thr Arg Asn Val Glu Arg Asp Lys Tyr Ala Asn	
465 470 475 480	
ttc act att aac ttt aca atg gaa aat cag att cat act gga atg gaa	1488
Phe Thr Ile Asn Phe Thr Met Glu Asn Gln Ile His Thr Gly Met Glu	
485 490 495	
tac gac aat ggc aga ttc ata ggg gtc aag ttc aaa tct gta act ttc	1536
Tyr Asp Asn Gly Arg Phe Ile Gly Val Lys Phe Lys Ser Val Thr Phe	
500 505 510	
aaa gac tct gtt ttt aag tcc tgc acc ttt gag gat gta act tca gtg	1584
Lys Asp Ser Val Phe Lys Ser Cys Thr Phe Glu Asp Val Thr Ser Val	
515 520 525	
aac acc tac ttc aag aac tgc aca ttt att gac act gtt ttt gac aac	1632
Asn Thr Tyr Phe Lys Asn Cys Thr Phe Ile Asp Thr Val Phe Asp Asn	
530 535 540	
aca gat ttt gag cca tat aaa ttc att gac agt gaa ttt aaa aac tgc	1680
Thr Asp Phe Glu Pro Tyr Lys Phe Ile Asp Ser Glu Phe Lys Asn Cys	
545 550 555 560	
tcg ttt ttt cac aac aag acg gga tgt cag att acc ttt gat gat gac	1728
Ser Phe Phe His Asn Lys Thr Gly Cys Gln Ile Thr Phe Asp Asp Asp	
565 570 575	
tat agt gcc tac tgg att tat ttt gtc aac ttt ctg ggg aca ttg gca	1776
Tyr Ser Ala Tyr Trp Ile Tyr Phe Val Asn Phe Leu Gly Thr Leu Ala	
580 585 590	
gta ttg cca ggg aac att gtg tct gct ctg ctg atg gac aga att ggg	1824
Val Leu Pro Gly Asn Ile Val Ser Ala Leu Leu Met Asp Arg Ile Gly	
595 600 605	

15/44

cgc tta aca atg cta ggt ggc tct atg gtg ctt tgc ggg atc agc tgt 1872
 Arg Leu Thr Met Leu Gly Gly Ser Met Val Leu Ser Gly Ile Ser Cys
 610 615 620

ttc ttc ctt tgg ttc ggc acc agt gaa tcc atg atg ata ggc atg ctg 1920
 Phe Phe Leu Trp Phe Gly Thr Ser Glu Ser Met Met Ile Gly Met Leu
 625 630 635 640

tgt ctg tac aat gga ttg acc atc tca gcc tgg aac tct ctt gac gtg 1968
 Cys Leu Tyr Asn Gly Leu Thr Ile Ser Ala Trp Asn Ser Leu Asp Val
 645 650 655

gtc act gtg gaa ctg tac ccc aca gac cgg agg gca aca ggc ttt ggc 2016
 Val Thr Val Glu Leu Tyr Pro Thr Asp Arg Arg Ala Thr Gly Phe Gly
 660 665 670

ttc tta aat gcg cta tgc aag gca gca gcc gtc ctg gga aac tta ata 2064
 Phe Leu Asn Ala Leu Cys Lys Ala Ala Val Leu Gly Asn Leu Ile
 675 680 685

ttt ggc tct ctg gtc agc atc acc aaa tca atc ccc atc ctg ctg gct 2112
 Phe Gly Ser Leu Val Ser Ile Thr Lys Ser Ile Pro Ile Leu Leu Ala
 690 695 700

tct act gtg ctc gtg tgt gga gga ctc gtt ggg ctg tgc ctg cct gac 2160
 Ser Thr Val Leu Val Cys Gly Gly Leu Val Gly Leu Cys Leu Pro Asp
 705 710 715 720

aca cga acc cag gtt ctg atg taa 2184
 Thr Arg Thr Gln Val Leu Met
 725

<210> 6
 <211> 727
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Glu Asp Ser Tyr Lys Asp Arg Thr Ser Leu Met Lys Gly Ala Lys
 1 5 10 15

Asp Ile Ala Arg Glu Val Lys Lys Gln Thr Val Lys Lys Val Asn Gln
 20 25 30

Ala Val Asp Arg Ala Gln Asp Glu Tyr Thr Gln Arg Ser Tyr Ser Arg
 35 40 45

Phe Gln Asp Glu Glu Asp Asp Asp Asp Tyr Tyr Pro Ala Gly Glu Thr
 50 55 60

Tyr Asn Gly Glu Ala Asn Asp Asp Glu Gly Ser Ser Glu Ala Thr Glu
 65 70 75 80

Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly Glu Tyr Gln Gly Ile
 85 90 95

Pro Ser Met Asn Gln Ala Lys Asp Ser Ile Val Ser Val Gly Gln Pro
 100 105 110

Lys Gly Asp Glu Tyr Lys Asp Arg Arg Glu Leu Glu Ser Glu Arg Arg

115	120	125
Ala Asp Glu Glu Glu Leu	Ala Gln Gln Tyr Glu	Leu Ile Ile Gln Glu
130	135	140
Cys Gly His Gly Arg Phe	Gln Trp Ala Leu Phe	Phe Val Leu Gly Met
145	150	155
Ala Leu Met Ala Asp Gly	Val Glu Val Phe Val	Val Gly Phe Val Leu
165	170	175
Pro Ser Ala Glu Thr Asp	Leu Cys Ile Pro Asn	Ser Gly Ser Gly Trp
180	185	190
Leu Gly Ser Ile Val Tyr	Leu Gly Met Met Val	Gly Ala Phe Phe Trp
195	200	205
Gly Gly Leu Ala Asp Lys	Val Gly Arg Lys Gln	Ser Leu Leu Ile Cys
210	215	220
Met Ser Val Asn Gly Phe	Phe Ala Phe Leu Ser	Ser Phe Val Gln Gly
225	230	235
Tyr Gly Phe Phe Leu Phe	Cys Arg Leu Leu Ser	Gly Phe Gly Ile Gly
245	250	255
Gly Ala Ile Pro Thr Val	Phe Ser Tyr Phe Ala	Glu Val Leu Ala Arg
260	265	270
Glu Lys Arg Gly Glu His	Leu Ser Trp Leu Cys	Met Phe Trp Met Ile
275	280	285
Gly Gly Ile Tyr Ala Ser	Ala Met Ala Trp Ala	Ile Ile Pro His Tyr
290	295	300
Gly Trp Ser Phe Ser Met	Gly Ser Ala Tyr Gln	Phe His Ser Trp Arg
305	310	315
Val Phe Val Ile Val Cys	Ala Leu Pro Cys Val	Ser Ser Val Val Ala
325	330	335
Leu Thr Phe Met Pro Glu	Ser Pro Arg Phe Leu	Leu Glu Val Gly Lys
340	345	350
His Asp Glu Ala Trp Met	Ile Leu Lys Leu Ile	His Asp Thr Asn Met
355	360	365
Arg Ala Arg Gly Gln Pro	Glu Lys Val Phe Thr	Val Asn Lys Ile Lys
370	375	380
Thr Pro Lys Gln Ile Asp	Glu Leu Ile Glu Ile	Glu Ser Asp Thr Gly
385	390	395
Thr Trp Tyr Arg Arg Cys	Phe Val Arg Ile Arg	Thr Glu Leu Tyr Gly
405	410	415
Ile Trp Leu Thr Phe Met	Arg Cys Phe Asn Tyr	Pro Val Arg Asp Asn
420	425	430
Thr Ile Lys Leu Thr Ile	Val Trp Phe Thr Leu	Ser Phe Gly Tyr Tyr
435	440	445

Gly Leu Ser Val Trp Phe Pro Asp Val Ile Lys Pro Leu Gln Ser Asp
 450 455 460
 Glu Tyr Ala Leu Leu Thr Arg Asn Val Glu Arg Asp Lys Tyr Ala Asn
 465 470 475 480
 Phe Thr Ile Asn Phe Thr Met Glu Asn Gln Ile His Thr Gly Met Glu
 485 490 495
 Tyr Asp Asn Gly Arg Phe Ile Gly Val Lys Phe Lys Ser Val Thr Phe
 500 505 510
 Lys Asp Ser Val Phe Lys Ser Cys Thr Phe Glu Asp Val Thr Ser Val
 515 520 525
 Asn Thr Tyr Phe Lys Asn Cys Thr Phe Ile Asp Thr Val Phe Asp Asn
 530 535 540
 Thr Asp Phe Glu Pro Tyr Lys Phe Ile Asp Ser Glu Phe Lys Asn Cys
 545 550 555 560
 Ser Phe Phe His Asn Lys Thr Gly Cys Gln Ile Thr Phe Asp Asp Asp
 565 570 575
 Tyr Ser Ala Tyr Trp Ile Tyr Phe Val Asn Phe Leu Gly Thr Leu Ala
 580 585 590
 Val Leu Pro Gly Asn Ile Val Ser Ala Leu Leu Met Asp Arg Ile Gly
 595 600 605
 Arg Leu Thr Met Leu Gly Gly Ser Met Val Leu Ser Gly Ile Ser Cys
 610 615 620
 Phe Phe Leu Trp Phe Gly Thr Ser Glu Ser Met Met Ile Gly Met Leu
 625 630 635 640
 Cys Leu Tyr Asn Gly Leu Thr Ile Ser Ala Trp Asn Ser Leu Asp Val
 645 650 655
 Val Thr Val Glu Leu Tyr Pro Thr Asp Arg Arg Ala Thr Gly Phe Gly
 660 665 670
 Phe Leu Asn Ala Leu Cys Lys Ala Ala Ala Val Leu Gly Asn Leu Ile
 675 680 685
 Phe Gly Ser Leu Val Ser Ile Thr Lys Ser Ile Pro Ile Leu Leu Ala
 690 695 700
 Ser Thr Val Leu Val Cys Gly Gly Leu Val Gly Leu Cys Leu Pro Asp
 705 710 715 720
 Thr Arg Thr Gln Val Leu Met
 725

<210> 7
 <211> 1647
 <212> DNA
 <213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1647)

<223>

<400> 7

atg gag gag gac tta ttc cag cta agg cag ctg ccg gtt gtg aaa ttc	48
Met Glu Glu Asp Leu Phe Gln Leu Arg Gln Leu Pro Val Val Lys Phe	
1 5 10 15	
cgt cgc aca ggc gag agt gca agg tca gag gac gac acg gct tca gga	96
Arg Arg Thr Gly Glu Ser Ala Arg Ser Glu Asp Asp Thr Ala Ser Gly	
20 25 30	
gag cat gaa gtc cag att gaa ggg gtc cac gtg ggc cta gag gct gtg	144
Glu His Glu Val Gln Ile Glu Gly Val His Val Gly Leu Glu Ala Val	
35 40 45	
gag ctg gat gat ggg gca gct gtg ccc aag gag ttt gcc aat ccc act	192
Glu Leu Asp Asp Gly Ala Ala Val Pro Lys Glu Phe Ala Asn Pro Thr	
50 55 60	
gat gat act ttc atg gtg gaa gat gca gtg gaa gcc att ggc ttt gga	240
Asp Asp Thr Phe Met Val Glu Asp Ala Val Glu Ala Ile Gly Phe Gly	
65 70 75 80	
aaa ttt cag tgg aag ctg tct gtt ctc act ggc ttg gct tgg atg gct	288
Lys Phe Gln Trp Lys Leu Ser Val Leu Thr Gly Leu Ala Trp Met Ala	
85 90 95	
gat gcc atg gag atg atg atc ctc agc atc ctg gca cca cag ctg cat	336
Asp Ala Met Glu Met Met Ile Leu Ser Ile Leu Ala Pro Gln Leu His	
100 105 110	
tgc gag tgg agg ctc cca agc tgg cag gtg gca ttg ctg acc tcg gtg	384
Cys Glu Trp Arg Leu Pro Ser Trp Gln Val Ala Leu Leu Thr Ser Val	
115 120 125	
gtc ttt gta ggc atg atg tcc agc tcc acg ctc tgg gga aat atc tca	432
Val Phe Val Gly Met Met Ser Ser Thr Leu Trp Gly Asn Ile Ser	
130 135 140	
gac cag tac ggc agg aaa aca ggg ctg aag atc agc gtg ctg tgg act	480
Asp Gln Tyr Gly Arg Lys Thr Gly Leu Lys Ile Ser Val Leu Trp Thr	
145 150 155 160	
ctg tac tat ggc atc ctt agt gca ttt gcg ccc gtg tat agc tgg atc	528
Leu Tyr Tyr Gly Ile Leu Ser Ala Phe Ala Pro Val Tyr Ser Trp Ile	
165 170 175	
ctg gtg ctc cgg ggc ctg gtg ggc ttc ggg atc gga gga gtt ccc cag	576
Leu Val Leu Arg Gly Leu Val Gly Phe Gly Ile Gly Gly Val Pro Gln	
180 185 190	
tcg gtg acg ctg tat gcc gag ttc ctt ccc atg aaa gcc aga gct aaa	624
Ser Val Thr Leu Tyr Ala Glu Phe Leu Pro Met Lys Ala Arg Ala Lys	
195 200 205	
tgt att ttg ctg att gag gta ttc tgg gcc atc ggg aca gtg ttc gag	672
Cys Ile Leu Leu Ile Glu Val Phe Trp Ala Ile Gly Thr Val Phe Glu	
210 215 220	

gtc gtc ctg gct gtg ttc gtg atg ccc agc ctg ggc tgg cgt tgg ctg	720
Val Val Leu Ala Val Phe Val Met Pro Ser Leu Gly Trp Arg Trp Leu	
225 230 235 240	
ctc atc ctc tca gct gtc ccg ctc ctc ctc ttt gcc gtg ctg tgt ttc	768
Leu Ile Leu Ser Ala Val Pro Leu Leu Leu Phe Ala Val Leu Cys Phe	
245 250 255	
tgg ctg cct gaa agt gca agg tat gat gtg ctg tca ggg aac cag gaa	816
Trp Leu Pro Glu Ser Ala Arg Tyr Asp Val Leu Ser Gly Asn Gln Glu	
260 265 270	
aag gca atc gcc acc tta aag agg ata gca act gaa aac gga gct ccc	864
Lys Ala Ile Ala Thr Leu Lys Arg Ile Ala Thr Glu Asn Gly Ala Pro	
275 280 285	
atg ccg ctg ggg aaa ctc atc atc tcc aga cag gaa gac cga ggc aaa	912
Met Pro Leu Gly Lys Leu Ile Ile Ser Arg Gln Glu Asp Arg Gly Lys	
290 295 300	
atg agg gac ctt ttc aca ccc cat ttt aga tgg aca act ttg ctg ctg	960
Met Arg Asp Leu Phe Thr Pro His Phe Arg Trp Thr Thr Leu Leu Leu	
305 310 315 320	
tgg ttt ata tgg ttt tcc aat gca ttc tct tac tac ggg tta gtt cta	1008
Trp Phe Ile Trp Phe Ser Asn Ala Phe Ser Tyr Tyr Gly Leu Val Leu	
325 330 335	
ctc acc aca gaa ctc ttc cag gca gga gat gtc tgc ggc atc tcc agt	1056
Leu Thr Thr Glu Leu Phe Gln Ala Gly Asp Val Cys Gly Ile Ser Ser	
340 345 350	
cgg aag aag gct gta gag gca aaa tgc agc ctg gcc tgc gag tac ctg	1104
Arg Lys Lys Ala Val Glu Ala Lys Cys Ser Leu Ala Cys Glu Tyr Leu	
355 360 365	
agt gag gag gat tac atg gac ttg ctg tgg acc acc ctc tct gag ttt	1152
Ser Glu Glu Asp Tyr Met Asp Leu Leu Trp Thr Thr Leu Ser Glu Phe	
370 375 380	
cca ggt gtc ctt gtg act ctg tgg att att gac cgc ctg ggg cgc aag	1200
Pro Gly Val Leu Val Thr Leu Trp Ile Ile Asp Arg Leu Gly Arg Lys	
385 390 395 400	
aag acc atg gcc ctg tgc ttt gtc atc ttc tcc ttc tgc agc ctc ctg	1248
Lys Thr Met Ala Leu Cys Phe Val Ile Phe Ser Phe Cys Ser Leu Leu	
405 410 415	
ctg ttt atc tgt gtt gga aga aat gtg ctc act ctg tta ctc ttc att	1296
Leu Phe Ile Cys Val Gly Arg Asn Val Leu Thr Leu Leu Leu Phe Ile	
420 425 430	
gca aga gcg ttt att tct gga ggc ttt caa gcg gca tat gtt tac aca	1344
Ala Arg Ala Phe Ile Ser Gly Gly Phe Gln Ala Ala Tyr Val Tyr Thr	
435 440 445	
cct gag gtc tac ccc acg gca acg cgg gcc ctc ggc ctg ggc acc tgc	1392
Pro Glu Val Tyr Pro Thr Ala Thr Arg Ala Leu Gly Leu Gly Thr Cys	
450 455 460	

20/44

agc ggc atg gca aga gtg ggt gct ctc atc act ccg ttc atc gcc cag 1440
 Ser Gly Met Ala Arg Val Gly Ala Leu Ile Thr Pro Phe Ile Ala Gln
 465 470 475 480

gtg atg ctg gaa tcc tct gtg tac ctg act ctg gca gtt tac agt ggc 1488
 Val Met Leu Glu Ser Ser Val Tyr Leu Thr Leu Ala Val Tyr Ser Gly
 485 490 495

tgc tgc ctc ctg gct gcc ctg gcc tcc tgc ttt ttg ccc att gag acc 1536
 Cys Cys Leu Leu Ala Ala Leu Ala Ser Cys Phe Leu Pro Ile Glu Thr
 500 505 510

aaa ggc cga gga ctg cag gag tcc agc cac cgg gag tgg ggc cag gag 1584
 Lys Gly Arg Gly Leu Gln Glu Ser Ser His Arg Glu Trp Gly Gln Glu
 515 520 525

atg gtc ggc cga gga atg cac ggt gca ggt gtt acc agg tcg aac tct 1632
 Met Val Gly Arg Gly Met His Gly Ala Gly Val Thr Arg Ser Asn Ser
 530 535 540

ggc tct cag gaa tag 1647
 Gly Ser Gln Glu
 545

<210> 8
 <211> 548
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Glu Glu Asp Leu Phe Gln Leu Arg Gln Leu Pro Val Val Lys Phe
 1 5 10 15
 Arg Arg Thr Gly Glu Ser Ala Arg Ser Glu Asp Asp Thr Ala Ser Gly
 20 25 30
 Glu His Glu Val Gln Ile Glu Gly Val His Val Gly Leu Glu Ala Val
 35 40 45
 Glu Leu Asp Asp Gly Ala Ala Val Pro Lys Glu Phe Ala Asn Pro Thr
 50 55 60
 Asp Asp Thr Phe Met Val Glu Asp Ala Val Glu Ala Ile Gly Phe Gly
 65 70 75 80
 Lys Phe Gln Trp Lys Leu Ser Val Leu Thr Gly Leu Ala Trp Met Ala
 85 90 95
 Asp Ala Met Glu Met Met Ile Leu Ser Ile Leu Ala Pro Gln Leu His
 100 105 110
 Cys Glu Trp Arg Leu Pro Ser Trp Gln Val Ala Leu Leu Thr Ser Val
 115 120 125
 Val Phe Val Gly Met Met Ser Ser Ser Thr Leu Trp Gly Asn Ile Ser
 130 135 140
 Asp Gln Tyr Gly Arg Lys Thr Gly Leu Lys Ile Ser Val Leu Trp Thr
 145 150 155 160

Leu Tyr Tyr Gly Ile Leu Ser Ala Phe Ala Pro Val Tyr Ser Trp Ile
 165 170 175
 Leu Val Leu Arg Gly Leu Val Gly Phe Gly Ile Gly Gly Val Pro Gln
 180 185 190
 Ser Val Thr Leu Tyr Ala Glu Phe Leu Pro Met Lys Ala Arg Ala Lys
 195 200 205
 Cys Ile Leu Leu Ile Glu Val Phe Trp Ala Ile Gly Thr Val Phe Glu
 210 215 220
 Val Val Leu Ala Val Phe Val Met Pro Ser Leu Gly Trp Arg Trp Leu
 225 230 235 240
 Leu Ile Leu Ser Ala Val Pro Leu Leu Leu Phe Ala Val Leu Cys Phe
 245 250 255
 Trp Leu Pro Glu Ser Ala Arg Tyr Asp Val Leu Ser Gly Asn Gln Glu
 260 265 270
 Lys Ala Ile Ala Thr Leu Lys Arg Ile Ala Thr Glu Asn Gly Ala Pro
 275 280 285
 Met Pro Leu Gly Lys Leu Ile Ile Ser Arg Gln Glu Asp Arg Gly Lys
 290 295 300
 Met Arg Asp Leu Phe Thr Pro His Phe Arg Trp Thr Thr Leu Leu Leu
 305 310 315 320
 Trp Phe Ile Trp Phe Ser Asn Ala Phe Ser Tyr Tyr Gly Leu Val Leu
 325 330 335
 Leu Thr Thr Glu Leu Phe Gln Ala Gly Asp Val Cys Gly Ile Ser Ser
 340 345 350
 Arg Lys Lys Ala Val Glu Ala Lys Cys Ser Leu Ala Cys Glu Tyr Leu
 355 360 365
 Ser Glu Glu Asp Tyr Met Asp Leu Leu Trp Thr Thr Leu Ser Glu Phe
 370 375 380
 Pro Gly Val Leu Val Thr Leu Trp Ile Ile Asp Arg Leu Gly Arg Lys
 385 390 395 400
 Lys Thr Met Ala Leu Cys Phe Val Ile Phe Ser Phe Cys Ser Leu Leu
 405 410 415
 Leu Phe Ile Cys Val Gly Arg Asn Val Leu Thr Leu Leu Leu Phe Ile
 420 425 430
 Ala Arg Ala Phe Ile Ser Gly Gly Phe Gln Ala Ala Tyr Val Tyr Thr
 435 440 445
 Pro Glu Val Tyr Pro Thr Ala Thr Arg Ala Leu Gly Leu Gly Thr Cys
 450 455 460
 Ser Gly Met Ala Arg Val Gly Ala Leu Ile Thr Pro Phe Ile Ala Gln
 465 470 475 480
 Val Met Leu Glu Ser Ser Val Tyr Leu Thr Leu Ala Val Tyr Ser Gly

Gly Ser Gln Glu
545

```
<210> 9
<211> 3844
<212> DNA
<213> Rattus norvegicus
```

```
<220>
<221> CDS
<222> (400) .. (2628)
<223>
```

[illegible]

ggc cac gat gag gat gat gag atc tac gag gga gaa tat cag ggc atc Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly Glu Tyr Gln Gly Ile 90 95 100	702
ccc cgg gca gag tct ggg ggc aaa ggc gaa cgg atg gca gat ggg gca Pro Arg Ala Glu Ser Gly Gly Lys Gly Glu Arg Met Ala Asp Gly Ala 105 110 115	750
ccc ctg gct gga gtg aga ggg ggc tta agt gat ggg gag ggt ccc cct Pro Leu Ala Gly Val Arg Gly Gly Leu Ser Asp Gly Glu Gly Pro Pro 120 125 130	798
ggg ggt cgc ggg gag gcg cag cgg cgt aaa gat cgg gaa gaa ttg gct Gly Gly Arg Gly Glu Ala Gln Arg Arg Lys Asp Arg Glu Glu Leu Ala 135 140 145	846
cag cag tat gag acc atc ctc cgg gag tgc ggc cat ggt cgc ttc cag Gln Gln Tyr Glu Thr Ile Leu Arg Glu Cys Gly His Gly Arg Phe Gln 150 155 160 165	894
tgg aca ctc tac ttc gtg ctg ggt ctg gcg ctg atg gcc gat ggt gta Trp Thr Leu Tyr Phe Val Leu Gly Leu Ala Leu Met Ala Asp Gly Val 170 175 180	942
gag gtc ttt gtg gtg ggc ttt gtg ctg ccc agt gct gag aaa gat atg Glu Val Phe Val Val Gly Phe Val Leu Pro Ser Ala Glu Lys Asp Met 185 190 195	990
tgc ctg tcg gac tcc aac aaa ggc atg cta ggc ctc att gtg tac ctg Cys Leu Ser Asp Ser Asn Lys Gly Met Leu Gly Leu Ile Val Tyr Leu 200 205 210	1038
ggc atg atg gtg ggg gcc ttc ctc tgg gga ggc ctg gct gat cgg ctg Gly Met Met Val Gly Ala Phe Leu Trp Gly Gly Leu Ala Asp Arg Leu 215 220 225	1086
ggt cgg aga cag tgt ctg ctc atc tcg ctc tca gtc aac agc gtc ttc Gly Arg Arg Gln Cys Leu Leu Ile Ser Leu Ser Val Asn Ser Val Phe 230 235 240 245	1134
gct ttc ttc tca tcc ttc gtc cag ggt tat ggc acc ttc ctt ttc tgc Ala Phe Phe Ser Ser Phe Val Gln Gly Tyr Gly Thr Phe Leu Phe Cys 250 255 260	1182
cgc ctc ctt tct ggg gtt ggg att ggt ggt tcc atc ccc att gtc ttc Arg Leu Leu Ser Gly Val Gly Ile Gly Gly Ser Ile Pro Ile Val Phe 265 270 275	1230
tcc tat ttt tcg gag ttt ctg gcc cag gag aaa cgt ggg gag cat ttg Ser Tyr Phe Ser Glu Phe Leu Ala Gln Glu Lys Arg Gly Glu His Leu 280 285 290	1278
agc tgg ctc tgt atg ttc tgg atg att ggt ggc gtg tat gca gct gca Ser Trp Leu Cys Met Phe Trp Met Ile Gly Gly Val Tyr Ala Ala Ala 295 300 305	1326
atg gcc tgg gcc atc atc ccc cac tat ggg tgg agt ttc cag atg ggc Met Ala Trp Ala Ile Ile Pro His Tyr Gly Trp Ser Phe Gln Met Gly 310 315 320 325	1374

tct gct tac cag ttc cac agc tgg agg gtc ttt gtc ctc gtc ttt gcc	1422
Ser Ala Tyr Gln Phe His Ser Trp Arg Val Phe Val Leu Val Phe Ala	
330 335 340	
ttt ccc tct gtg ttt gcc atc ggg gct ctg act acg cag ccg gag agt	1470
Phe Pro Ser Val Phe Ala Ile Gly Ala Leu Thr Thr Gln Pro Glu Ser	
345 350 355	
ccc cgc ttc ttc tta gag aat ggg aag cac gat gag gcc tgg atg gtg	1518
Pro Arg Phe Phe Leu Glu Asn Gly Lys His Asp Glu Ala Trp Met Val	
360 365 370	
ctg aag cag gtt cat gac acc aac atg cga gcc aag ggc cat cct gag	1566
Leu Lys Gln Val His Asp Thr Asn Met Arg Ala Lys Gly His Pro Glu	
375 380 385	
cga gtc ttc tca gta acc cac att aaa acg att cat cag gag gat gaa	1614
Arg Val Phe Ser Val Thr His Ile Lys Thr Ile His Gln Glu Asp Glu	
390 395 400 405	
ttg att gag atc cag tca gac aca gga acc tgg tac cag cgc tgg gga	1662
Leu Ile Glu Ile Gln Ser Asp Thr Gly Thr Trp Tyr Gln Arg Trp Gly	
410 415 420	
gtg cgg gct ttg agc ctg ggg ggt cag gtt tgg ggg aac ttc ctc tcc	1710
Val Arg Ala Leu Ser Leu Gly Gly Gln Val Trp Gly Asn Phe Leu Ser	
425 430 435	
tgc ttc agt cca gag tac cgg cgc atc act ctg atg atg atg ggg gta	1758
Cys Phe Ser Pro Glu Tyr Arg Arg Ile Thr Leu Met Met Met Gly Val	
440 445 450	
tgg ttc acc atg tcc ttc agc tac tac ggt ttg act gtc tgg ttt ccc	1806
Trp Phe Thr Met Ser Phe Ser Tyr Tyr Gly Leu Thr Val Trp Phe Pro	
455 460 465	
gac atg atc cgc cat ctc cag gct gtg gac tat gca gcc cga acc aaa	1854
Asp Met Ile Arg His Leu Gln Ala Val Asp Tyr Ala Ala Arg Thr Lys	
470 475 480 485	
gtg ttc cca ggg gag cgc gtg gag cac gtg aca ttt aac ttc aca ctg	1902
Val Phe Pro Gly Glu Arg Val Glu His Val Thr Phe Asn Phe Thr Leu	
490 495 500	
gag aat cag atc cac cga ggg gga cag tac ttc aat gac aag ttc atc	1950
Glu Asn Gln Ile His Arg Gly Gly Gln Tyr Phe Asn Asp Lys Phe Ile	
505 510 515	
ggg ctg cgt ctg aag tca gtg tcc ttt gag gat tcc ctg ttt gag gaa	1998
Gly Leu Arg Leu Lys Ser Val Ser Phe Glu Asp Ser Leu Phe Glu Glu	
520 525 530	
tgt tac ttt gaa gat gtc aca tcc agc aac aca ttc ttc cgc aac tgc	2046
Cys Tyr Phe Glu Asp Val Thr Ser Ser Asn Thr Phe Phe Arg Asn Cys	
535 540 545	
aca ttc atc aac acc gtg ttc tac aac acg gac ctg ttt gag tac aag	2094
Thr Phe Ile Asn Thr Val Phe Tyr Asn Thr Asp Leu Phe Glu Tyr Lys	
550 555 560 565	
ttc gtg aac agc cgc ctg gtg aac agc aca ttc ctg cac aat aag gaa	2142

25/44

Phe	Val	Asn	Ser	Arg	Leu	Val	Asn	Ser	Thr	Phe	Leu	His	Asn	Lys	Glu		
				570					575					580			
ggt	tgc	cca	cta	gat	gtg	aca	ggg	acg	ggc	gaa	ggt	gcc	tac	atg	gtg	2190	
Gly	Cys	Pro	Leu	Asp	Val	Thr	Gly	Thr	Gly	Glu	Gly	Ala	Tyr	Met	Val		
				585					590					595			
tac	ttt	gtc	agc	ttc	ttg	ggg	aca	ctg	gct	gtg	ctc	cct	gga	aat	att	2238	
Tyr	Phe	Val	Ser	Phe	Leu	Gly	Thr	Leu	Ala	Val	Leu	Pro	Gly	Asn	Ile		
				600					605					610			
gtg	tct	gct	ctg	ctc	atg	gac	aag	att	ggc	agg	ctc	aga	atg	ctt	gct	2286	
Val	Ser	Ala	Leu	Leu	Met	Asp	Lys	Ile	Gly	Arg	Leu	Arg	Met	Leu	Ala		
				615					620					625			
ggt	tcc	agt	gtg	ttg	tcc	tgt	gtt	tcc	tgc	ttc	ttc	ctg	tct	ttt	ggg	2334	
Gly	Ser	Ser	Val	Leu	Ser	Cys	Val	Ser	Cys	Phe	Phe	Leu	Ser	Phe	Gly		
				630					635					640			645
aac	agt	gag	tca	gcc	atg	atc	gct	ctg	ctc	tgc	ctt	ttt	ggg	gga	gtc	2382	
Asn	Ser	Glu	Ser	Ala	Met	Ile	Ala	Leu	Leu	Cys	Leu	Phe	Gly	Gly	Val		
				650					655					660			
agt	att	gca	tcc	tgg	aac	gcg	ctg	gac	gtg	ctg	act	gtt	gaa	ctc	tac	2430	
Ser	Ile	Ala	Ser	Trp	Asn	Ala	Leu	Asp	Val	Leu	Thr	Val	Glu	Leu	Tyr		
				665					670					675			
cct	tcc	gac	aag	agg	acg	acg	gcc	ttc	ggc	ttc	ctg	aat	gcc	ctg	tgt	2478	
Pro	Ser	Asp	Lys	Arg	Thr	Thr	Ala	Phe	Gly	Phe	Leu	Asn	Ala	Leu	Cys		
				680					685					690			
aag	ctg	gca	gct	gta	ctg	ggc	atc	agc	atc	ttc	acg	tcc	ttt	gtg	gga	2526	
Lys	Leu	Ala	Ala	Val	Leu	Gly	Ile	Ser	Ile	Phe	Thr	Ser	Phe	Val	Gly		
				695					700					705			
atc	acc	aag	gcc	gct	ccc	atc	ctc	ttc	gcc	tca	gct	gcg	ctt	gcc	ctt	2574	
Ile	Thr	Lys	Ala	Ala	Pro	Ile	Leu	Phe	Ala	Ser	Ala	Ala	Leu	Ala	Leu		
				710					715					720			725
ggt	agc	tct	ctg	gct	ctg	aag	ctg	cct	gag	acc	cgg	gga	cag	gtg	ctg	2622	
Gly	Ser	Ser	Leu	Ala	Leu	Lys	Leu	Pro	Glu	Thr	Arg	Gly	Gln	Val	Leu		
				730					735					740			
cag	tga	gggat	ggggg	agtg	tctcag	ggg	cttttagg	gat	ggcaggc	acact	gtgac					2678	
Gln																	
caataatttc ttttatccct accctgccct gctgtcctgg tctactccg tgtttggtgt																2738	
cttagctgtg tgccctgtgtg catgtgtgtg accctgacgg gcaggggcta cggggagggt																2798	
ccctttgtcc catgtttggg aggagggact cccacctgc tgccaccctc aactttgcac																2858	
aaggagaagg ctgagctgca tccttctctc cctcagtgtt agcaggggtg gggacgactg																2918	
tttctctgct ccaggtgttc cagaatttct gcctttccca tcattccctc cgcctaggcc																2978	
ctggtgaacc acaggtatgg agttatagtg ggggctgagg cttggaccaa aagaacttct																3038	
tgagtgggag cctcccaagg atgctgggga gtagcaataa accttagcct ccgttttcac																3098	
ctcaattcag gctacaagtg tgaagcctgg attttatgga attagttttc tgattcttat																3158	

```

ttatatgtaa gttctgaggc agcttagctg gactgtgtgt ggatgtatac atacactcat 3218
atgtgtgtgt gtgtgcgccg cgtgcgtgtg cgtgtgtgta tgtgtgccat ggggtagggg 3278
taccactata ctgttcaatt ataagccaag agtagtagtt tcagttagca cacacacaac 3338
actgtttttc tatcgtaact ccagaaatct tgtacctgtg ttggggctgc aggcagaagt 3398
ccttggtcag gctgggggtga gccctgcaat cttggggggac ctgagggcac ctgacaagga 3458
ctttctcctt cctctagaga ggttctaccc actagccaca gccctcccat ctgacctgtc 3518
cacacaggca gtgtatcaga ggaaagaaag ggaaaataac caggcacaca tgggtcaaacc 3578
agcaggtctg aaagcacaag aagctggggc aggggcagga agcaggggtc catcccctaa 3638
cccttctcaa aaaggctggg tcgtgagggg cccctaattgc agggacctga agcctcagtt 3698
tccccatctt gcccttcac agaacagcct ctgtaggtag agctgcccc cgtcctaccc 3758
tactcttggtg gctgctttct ttggtactct tccactccc accgtagctg tgacgtgttg 3818
tagtttttag ctgtttgtaa aatggt 3844

```

```

<210> 10
<211> 742
<212> PRT
<213> Rattus norvegicus

```

```

<400> 10
Met Glu Glu Gly Phe Arg Asp Arg Ala Ala Phe Ile Arg Gly Ala Lys
1 5 10 15
Asp Ile Ala Lys Glu Val Lys Lys His Ala Ala Lys Lys Val Val Lys
20 25 30
Gly Leu Asp Arg Val Gln Asp Glu Tyr Ser Arg Arg Ser Tyr Ser Arg
35 40 45
Phe Glu Glu Glu Glu Asp Asp Asp Asp Phe Pro Ala Pro Ala Asp Gly
50 55 60
Tyr Tyr Arg Gly Glu Gly Ala Gln Asp Glu Glu Glu Gly Gly Ala Ser
65 70 75 80
Ser Asp Ala Thr Glu Gly His Asp Glu Asp Asp Glu Ile Tyr Glu Gly
85 90 95
Glu Tyr Gln Gly Ile Pro Arg Ala Glu Ser Gly Gly Lys Gly Glu Arg
100 105 110
Met Ala Asp Gly Ala Pro Leu Ala Gly Val Arg Gly Gly Leu Ser Asp
115 120 125
Gly Glu Gly Pro Pro Gly Gly Arg Gly Glu Ala Gln Arg Arg Lys Asp
130 135 140
Arg Glu Glu Leu Ala Gln Gln Tyr Glu Thr Ile Leu Arg Glu Cys Gly
145 150 155 160

```

His Gly Arg Phe Gln Trp Thr Leu Tyr Phe Val Leu Gly Leu Ala Leu
 165 170 175
 Met Ala Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu Pro Ser
 180 185 190
 Ala Glu Lys Asp Met Cys Leu Ser Asp Ser Asn Lys Gly Met Leu Gly
 195 200 205
 Leu Ile Val Tyr Leu Gly Met Met Val Gly Ala Phe Leu Trp Gly Gly
 210 215 220
 Leu Ala Asp Arg Leu Gly Arg Arg Gln Cys Leu Leu Ile Ser Leu Ser
 225 230 235 240
 Val Asn Ser Val Phe Ala Phe Phe Ser Ser Phe Val Gln Gly Tyr Gly
 245 250 255
 Thr Phe Leu Phe Cys Arg Leu Leu Ser Gly Val Gly Ile Gly Gly Ser
 260 265 270
 Ile Pro Ile Val Phe Ser Tyr Phe Ser Glu Phe Leu Ala Gln Glu Lys
 275 280 285
 Arg Gly Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile Gly Gly
 290 295 300
 Val Tyr Ala Ala Ala Met Ala Trp Ala Ile Ile Pro His Tyr Gly Trp
 305 310 315 320
 Ser Phe Gln Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg Val Phe
 325 330 335
 Val Leu Val Phe Ala Phe Pro Ser Val Phe Ala Ile Gly Ala Leu Thr
 340 345 350
 Thr Gln Pro Glu Ser Pro Arg Phe Phe Leu Glu Asn Gly Lys His Asp
 355 360 365
 Glu Ala Trp Met Val Leu Lys Gln Val His Asp Thr Asn Met Arg Ala
 370 375 380
 Lys Gly His Pro Glu Arg Val Phe Ser Val Thr His Ile Lys Thr Ile
 385 390 395 400
 His Gln Glu Asp Glu Leu Ile Glu Ile Gln Ser Asp Thr Gly Thr Trp
 405 410 415
 Tyr Gln Arg Trp Gly Val Arg Ala Leu Ser Leu Gly Gly Gln Val Trp
 420 425 430
 Gly Asn Phe Leu Ser Cys Phe Ser Pro Glu Tyr Arg Arg Ile Thr Leu
 435 440 445
 Met Met Met Gly Val Trp Phe Thr Met Ser Phe Ser Tyr Tyr Gly Leu
 450 455 460
 Thr Val Trp Phe Pro Asp Met Ile Arg His Leu Gln Ala Val Asp Tyr
 465 470 475 480

28/44

Ala Ala Arg Thr Lys Val Phe Pro Gly Glu Arg Val Glu His Val Thr
485 490 495

Phe Asn Phe Thr Leu Glu Asn Gln Ile His Arg Gly Gly Gln Tyr Phe
500 505 510

Asn Asp Lys Phe Ile Gly Leu Arg Leu Lys Ser Val Ser Phe Glu Asp
515 520 525

Ser Leu Phe Glu Glu Cys Tyr Phe Glu Asp Val Thr Ser Ser Asn Thr
530 535 540

Phe Phe Arg Asn Cys Thr Phe Ile Asn Thr Val Phe Tyr Asn Thr Asp
545 550 555 560

Leu Phe Glu Tyr Lys Phe Val Asn Ser Arg Leu Val Asn Ser Thr Phe
565 570 575

Leu His Asn Lys Glu Gly Cys Pro Leu Asp Val Thr Gly Thr Gly Glu
580 585 590

Gly Ala Tyr Met Val Tyr Phe Val Ser Phe Leu Gly Thr Leu Ala Val
595 600 605

Leu Pro Gly Asn Ile Val Ser Ala Leu Leu Met Asp Lys Ile Gly Arg
610 615 620

Leu Arg Met Leu Ala Gly Ser Ser Val Leu Ser Cys Val Ser Cys Phe
625 630 635 640

Phe Leu Ser Phe Gly Asn Ser Glu Ser Ala Met Ile Ala Leu Leu Cys
645 650 655

Leu Phe Gly Gly Val Ser Ile Ala Ser Trp Asn Ala Leu Asp Val Leu
660 665 670

Thr Val Glu Leu Tyr Pro Ser Asp Lys Arg Thr Thr Ala Phe Gly Phe
675 680 685

Leu Asn Ala Leu Cys Lys Leu Ala Ala Val Leu Gly Ile Ser Ile Phe
690 695 700

Thr Ser Phe Val Gly Ile Thr Lys Ala Ala Pro Ile Leu Phe Ala Ser
705 710 715 720

Ala Ala Leu Ala Leu Gly Ser Ser Leu Ala Leu Lys Leu Pro Glu Thr
725 730 735

Arg Gly Gln Val Leu Gln
740

<210> 11
<211> 2052
<212> DNA
<213> Rattus norvegicus

<220>
<221> CDS
<222> (1)..(2052)
<223>

<400> 11
 atg gat gac tac agg tat cgg gac aac tat gag ggc tat gcc cct aat 48
 Met Asp Asp Tyr Arg Tyr Arg Asp Asn Tyr Glu Gly Tyr Ala Pro Asn
 1 5 10 15

gat ggc tac tac cgg ggc aat gag cag aac ccg gaa gaa gat gca cag 96
 Asp Gly Tyr Tyr Arg Gly Asn Glu Gln Asn Pro Glu Glu Asp Ala Gln
 20 25 30

agc gat gtt aca gaa ggc cac gat gaa gag gat gag atc tat gag ggc 144
 Ser Asp Val Thr Glu Gly His Asp Glu Glu Asp Glu Ile Tyr Glu Gly
 35 40 45

gag tac caa ggc atc cct cat cca gat gat gtc aag tct aag cag act 192
 Glu Tyr Gln Gly Ile Pro His Pro Asp Asp Val Lys Ser Lys Gln Thr
 50 55 60

aag atg gca ccg tcc aga gca gat ggc ctt cgg ggc cag gca gac ctg 240
 Lys Met Ala Pro Ser Arg Ala Asp Gly Leu Arg Gly Gln Ala Asp Leu
 65 70 75 80

atg gct gag aga atg gaa gat gag gag cag ctc gct cac cag tac gag 288
 Met Ala Glu Arg Met Glu Asp Glu Glu Gln Leu Ala His Gln Tyr Glu
 85 90 95

acc atc att gat gag tgt ggc cat ggg cgc ttc cag tgg acc ctc ttt 336
 Thr Ile Ile Asp Glu Cys Gly His Gly Arg Phe Gln Trp Thr Leu Phe
 100 105 110

ttc gtc ttg gtc ttg gcc ttg atg gct gac gga gtg gaa gtg ttt gtg 384
 Phe Val Leu Val Leu Ala Leu Met Ala Asp Gly Val Glu Val Phe Val
 115 120 125

gtg agc ttt gct ctg cca agt gca gag aaa gat atg tgt ctg tca agt 432
 Val Ser Phe Ala Leu Pro Ser Ala Glu Lys Asp Met Cys Leu Ser Ser
 130 135 140

tcc aag aaa gga atg ctc ggg ctg att gtc tac cta gga atg atg gca 480
 Ser Lys Lys Gly Met Leu Gly Leu Ile Val Tyr Leu Gly Met Met Ala
 145 150 155 160

gga gcc ttc atc ctg ggg ggc ctg gct gat aaa ctg gga agg aag aag 528
 Gly Ala Phe Ile Leu Gly Gly Leu Ala Asp Lys Leu Gly Arg Lys Lys
 165 170 175

gtc ctc agc atg tcc ttg gct atc aat gct tcc ttt gcc tcc ctc tcc 576
 Val Leu Ser Met Ser Leu Ala Ile Asn Ala Ser Phe Ala Ser Leu Ser
 180 185 190

tcc ttc gtg cag gga tat gga gct ttc ctc ttc tgc aga ctc atc tca 624
 Ser Phe Val Gln Gly Tyr Gly Ala Phe Leu Phe Cys Arg Leu Ile Ser
 195 200 205

ggc ata ggt att ggg ggc tcc ctg cca att gtt ttt gcc tac ttt tct 672
 Gly Ile Gly Ile Gly Gly Ser Leu Pro Ile Val Phe Ala Tyr Phe Ser
 210 215 220

gag ttc tta tca cgg gag aaa cgc ggt gag cat ctc agc tgg ctg ggt 720
 Glu Phe Leu Ser Arg Glu Lys Arg Gly Glu His Leu Ser Trp Leu Gly
 225 230 235 240

atc ttc tgg atg act ggg ggc atc tac gca tct gcc atg gcc tgg agc Ile Phe Trp Met Thr Gly Gly Ile Tyr Ala Ser Ala Met Ala Trp Ser 245 250 255	768
atc att cca cac tat ggc tgg ggc ttc agc atg gga acc aat tat cac Ile Ile Pro His Tyr Gly Trp Gly Phe Ser Met Gly Thr Asn Tyr His 260 265 270	816
ttc cac agc tgg aga gtg ttt gtc atc gtc tgt gct ctg cct gcc act Phe His Ser Trp Arg Val Phe Val Ile Val Cys Ala Leu Pro Ala Thr 275 280 285	864
gtg tcc atg gtg gcc ctg aag ttc atg cca gaa agc ccc agg ttc ctg Val Ser Met Val Ala Leu Lys Phe Met Pro Glu Ser Pro Arg Phe Leu 290 295 300	912
ctg gag atg ggc aag cat gat gaa gcc tgg atg att ctc aag caa gtc Leu Glu Met Gly Lys His Asp Glu Ala Trp Met Ile Leu Lys Gln Val 305 310 315 320	960
cat gac acc aac atg aga gct aag ggg acc cct gag aag gtg ttc acg His Asp Thr Asn Met Arg Ala Lys Gly Thr Pro Glu Lys Val Phe Thr 325 330 335	1008
gtt tcc cac atc aaa act ccc aag caa atg gat gaa ttc att gag atc Val Ser His Ile Lys Thr Pro Lys Gln Met Asp Glu Phe Ile Glu Ile 340 345 350	1056
cag agt tca aca ggg act tgg tac cag cgc tgg ttg gtc agg ttc atg Gln Ser Ser Thr Gly Thr Trp Tyr Gln Arg Trp Leu Val Arg Phe Met 355 360 365	1104
acc att ttc aaa cag gtg tgg gat aac gcc ttg tac tgt gtg atg gga Thr Ile Phe Lys Gln Val Trp Asp Asn Ala Leu Tyr Cys Val Met Gly 370 375 380	1152
ccc tac aga atg aac acc ctg att ctg gct gtg gtc tgg ttc acc atg Pro Tyr Arg Met Asn Thr Leu Ile Leu Ala Val Val Trp Phe Thr Met 385 390 395 400	1200
gcc tta agt tac tat ggc ctg aca gtg tgg ttc ccc gac atg atc cgg Ala Leu Ser Tyr Tyr Gly Leu Thr Val Trp Phe Pro Asp Met Ile Arg 405 410 415	1248
tat ttc cag gat gaa gaa tat aag tct aaa atg aag gtg ttt ttt ggt Tyr Phe Gln Asp Glu Glu Tyr Lys Ser Lys Met Lys Val Phe Phe Gly 420 425 430	1296
gag cac gtg cat ggc gcc aca atc aac ttc acc atg gaa aac cag atc Glu His Val His Gly Ala Thr Ile Asn Phe Thr Met Glu Asn Gln Ile 435 440 445	1344
cac caa cat ggg aag ctt gtg aac gat aag ttc ata aag atg tac ttt His Gln His Gly Lys Leu Val Asn Asp Lys Phe Ile Lys Met Tyr Phe 450 455 460	1392
aag cat gtc ctc ttt gag gac aca ttc ttt gac aaa tgc tat ttt gaa Lys His Val Leu Phe Glu Asp Thr Phe Phe Asp Lys Cys Tyr Phe Glu 465 470 475 480	1440

31/44

gat gtg aca tcc aca gat act tat ttc aag aac tgc acc att gaa tcg 1488
Asp Val Thr Ser Thr Asp Thr Tyr Phe Lys Asn Cys Thr Ile Glu Ser 495
485

act acc ttc tac aac aca gac ctc tac aaa cac aag ttc att gac tgt 1536
Thr Thr Phe Tyr Asn Thr Asp Leu Tyr Lys His Lys Phe Ile Asp Cys 510
500 505

cgg ttt atc aat tcc acc ttt ctg gag cag aag gag ggc tgc cac atg 1584
Arg Phe Ile Asn Ser Thr Phe Leu Glu Gln Lys Glu Gly Cys His Met 525
515 520

gac ttt gaa gag gac aat gat ttt ctg att tac ctc gtc agc ttc ctc 1632
Asp Phe Glu Glu Asp Asn Asp Phe Leu Ile Tyr Leu Val Ser Phe Leu 540
530 535

ggc agc ctg tct gtc ttg cct ggg aac ata att tct gcc ctg ctc atg 1680
Gly Ser Leu Ser Val Leu Pro Gly Asn Ile Ile Ser Ala Leu Leu Met 555
545 550 560

gac aga atc gga aga ctt aag atg att ggt ggc tcc atg ctc atc tct 1728
Asp Arg Ile Gly Arg Leu Lys Met Ile Gly Gly Ser Met Leu Ile Ser 575
565 570

gca gtc tgc tgc ttc ttc ctg ttt ttt ggc aac agc gag tct gcg atg 1776
Ala Val Cys Cys Phe Phe Leu Phe Phe Gly Asn Ser Glu Ser Ala Met 590
580 585

atc ggc tgg caa tgc ctg ttc tgt ggg acc agc att gca gcc tgg aat 1824
Ile Gly Trp Gln Cys Leu Phe Cys Gly Thr Ser Ile Ala Ala Trp Asn 605
595 600

gct ctg gat gtg atc aca gta gag ctg tat ccc acc aac cag agg gcc 1872
Ala Leu Asp Val Ile Thr Val Glu Leu Tyr Pro Thr Asn Gln Arg Ala 620
610 615

act gcc ttc ggc atc ctc aat gga ctg tgc aaa ctt ggt gcc atc ctg 1920
Thr Ala Phe Gly Ile Leu Asn Gly Leu Cys Lys Leu Gly Ala Ile Leu 640
625 630 635

gga aac act atc ttt gct tct ttt gtt ggg atc acc aaa gtg gtc ccc 1968
Gly Asn Thr Ile Phe Ala Ser Phe Val Gly Ile Thr Lys Val Val Pro 655
645 650

atc ctt ctg gct gct gct tct ctg gtt gga ggt ggc ttg gtt gcc ctt 2016
Ile Leu Leu Ala Ala Ala Ser Leu Val Gly Gly Gly Leu Val Ala Leu 670
660 665

cga ctg cca gag act cga gag cag gtc ctg atg tga 2052
Arg Leu Pro Glu Thr Arg Glu Gln Val Leu Met 680
675 680

<210> 12

<211> 683

<212> PRT

<213> Rattus norvegicus

<400> 12

Met Asp Asp Tyr Arg Tyr Arg Asp Asn Tyr Glu Gly Tyr Ala Pro Asn
1 5 10 15

Asp Gly Tyr Tyr Arg Gly Asn Glu Gln Asn Pro Glu Glu Asp Ala Gln
 20 25 30
 Ser Asp Val Thr Glu Gly His Asp Glu Glu Asp Glu Ile Tyr Glu Gly
 35 40 45
 Glu Tyr Gln Gly Ile Pro His Pro Asp Asp Val Lys Ser Lys Gln Thr
 50 55 60
 Lys Met Ala Pro Ser Arg Ala Asp Gly Leu Arg Gly Gln Ala Asp Leu
 65 70 75 80
 Met Ala Glu Arg Met Glu Asp Glu Glu Gln Leu Ala His Gln Tyr Glu
 85 90 95
 Thr Ile Ile Asp Glu Cys Gly His Gly Arg Phe Gln Trp Thr Leu Phe
 100 105 110
 Phe Val Leu Val Leu Ala Leu Met Ala Asp Gly Val Glu Val Phe Val
 115 120 125
 Val Ser Phe Ala Leu Pro Ser Ala Glu Lys Asp Met Cys Leu Ser Ser
 130 135 140
 Ser Lys Lys Gly Met Leu Gly Leu Ile Val Tyr Leu Gly Met Met Ala
 145 150 155 160
 Gly Ala Phe Ile Leu Gly Gly Leu Ala Asp Lys Leu Gly Arg Lys Lys
 165 170 175
 Val Leu Ser Met Ser Leu Ala Ile Asn Ala Ser Phe Ala Ser Leu Ser
 180 185 190
 Ser Phe Val Gln Gly Tyr Gly Ala Phe Leu Phe Cys Arg Leu Ile Ser
 195 200 205
 Gly Ile Gly Ile Gly Gly Ser Leu Pro Ile Val Phe Ala Tyr Phe Ser
 210 215 220
 Glu Phe Leu Ser Arg Glu Lys Arg Gly Glu His Leu Ser Trp Leu Gly
 225 230 235 240
 Ile Phe Trp Met Thr Gly Gly Ile Tyr Ala Ser Ala Met Ala Trp Ser
 245 250 255
 Ile Ile Pro His Tyr Gly Trp Gly Phe Ser Met Gly Thr Asn Tyr His
 260 265 270
 Phe His Ser Trp Arg Val Phe Val Ile Val Cys Ala Leu Pro Ala Thr
 275 280 285
 Val Ser Met Val Ala Leu Lys Phe Met Pro Glu Ser Pro Arg Phe Leu
 290 295 300
 Leu Glu Met Gly Lys His Asp Glu Ala Trp Met Ile Leu Lys Gln Val
 305 310 315 320
 His Asp Thr Asn Met Arg Ala Lys Gly Thr Pro Glu Lys Val Phe Thr
 325 330 335

Val Ser His Ile Lys Thr Pro Lys Gln Met Asp Glu Phe Ile Glu Ile
 340 345 350
 Gln Ser Ser Thr Gly Thr Trp Tyr Gln Arg Trp Leu Val Arg Phe Met
 355 360 365
 Thr Ile Phe Lys Gln Val Trp Asp Asn Ala Leu Tyr Cys Val Met Gly
 370 375 380
 Pro Tyr Arg Met Asn Thr Leu Ile Leu Ala Val Val Trp Phe Thr Met
 385 390 395 400
 Ala Leu Ser Tyr Tyr Gly Leu Thr Val Trp Phe Pro Asp Met Ile Arg
 405 410 415
 Tyr Phe Gln Asp Glu Glu Tyr Lys Ser Lys Met Lys Val Phe Phe Gly
 420 425 430
 Glu His Val His Gly Ala Thr Ile Asn Phe Thr Met Glu Asn Gln Ile
 435 440 445
 His Gln His Gly Lys Leu Val Asn Asp Lys Phe Ile Lys Met Tyr Phe
 450 455 460
 Lys His Val Leu Phe Glu Asp Thr Phe Phe Asp Lys Cys Tyr Phe Glu
 465 470 475 480
 Asp Val Thr Ser Thr Asp Thr Tyr Phe Lys Asn Cys Thr Ile Glu Ser
 485 490 495
 Thr Thr Phe Tyr Asn Thr Asp Leu Tyr Lys His Lys Phe Ile Asp Cys
 500 505 510
 Arg Phe Ile Asn Ser Thr Phe Leu Glu Gln Lys Glu Gly Cys His Met
 515 520 525
 Asp Phe Glu Glu Asp Asn Asp Phe Leu Ile Tyr Leu Val Ser Phe Leu
 530 535 540
 Gly Ser Leu Ser Val Leu Pro Gly Asn Ile Ile Ser Ala Leu Leu Met
 545 550 555 560
 Asp Arg Ile Gly Arg Leu Lys Met Ile Gly Gly Ser Met Leu Ile Ser
 565 570 575
 Ala Val Cys Cys Phe Phe Leu Phe Phe Gly Asn Ser Glu Ser Ala Met
 580 585 590
 Ile Gly Trp Gln Cys Leu Phe Cys Gly Thr Ser Ile Ala Ala Trp Asn
 595 600 605
 Ala Leu Asp Val Ile Thr Val Glu Leu Tyr Pro Thr Asn Gln Arg Ala
 610 615 620
 Thr Ala Phe Gly Ile Leu Asn Gly Leu Cys Lys Leu Gly Ala Ile Leu
 625 630 635 640
 Gly Asn Thr Ile Phe Ala Ser Phe Val Gly Ile Thr Lys Val Val Pro
 645 650 655
 Ile Leu Leu Ala Ala Ala Ser Leu Val Gly Gly Gly Leu Val Ala Leu

660

665

670

Arg Leu Pro Glu Thr Arg Glu Gln Val Leu Met
 675 680

<210> 13
 <211> 2622
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> CDS
 <222> (224) .. (2407)
 <223>

<400> 13
 gcgcgctgca ggaagagtgg cagaccgaag cggcctcggg ctgcaaacgg aggggcgctc 60
 gcgcggcgac ggctgcaggg ctgacaccgc tcagggcagg ggggtcccag gcggctggaa 120
 cgctctattc tgaactgtga gtggatgatg ctgttgacgc caagctgctg aacacactcc 180
 gtggactctt ccttgctgtg ccttgcccat cggccgagat aaa atg gaa gac tcc 235
 Met Glu Asp Ser
 1
 tac aag gat agg act tca ctg atg aag ggc gcc aag gac att gcc aaa 283
 Tyr Lys Asp Arg Thr Ser Leu Met Lys Gly Ala Lys Asp Ile Ala Lys
 5 10 15 20
 gag gtg aag aag caa aca gtg aag aag gtg aac cag gca gtg gac cgg 331
 Glu Val Lys Lys Gln Thr Val Lys Lys Val Asn Gln Ala Val Asp Arg
 25 30 35
 gcc cag gat gaa tac acc cag cgg tcc tac agt cga ttc cag gat gaa 379
 Ala Gln Asp Glu Tyr Thr Gln Arg Ser Tyr Ser Arg Phe Gln Asp Glu
 40 45 50
 gat gat gat gat gac tac tac cca cct gga gaa acc tac agt ggg gag 427
 Asp Asp Asp Asp Tyr Tyr Pro Pro Gly Glu Thr Tyr Ser Gly Glu
 55 60 65
 gcc aat gat gat gaa ggc tca agt gaa gcc act gag ggt cac gat gaa 475
 Ala Asn Asp Asp Glu Gly Ser Ser Glu Ala Thr Glu Gly His Asp Glu
 70 75 80
 gaa gac gag atc tat gaa ggg gaa tac cag ggc atc ccc agc acg aac 523
 Glu Asp Glu Ile Tyr Glu Gly Glu Tyr Gln Gly Ile Pro Ser Thr Asn
 85 90 95 100
 caa ggg aag gac agc ata gtg tct gta gga caa ccc aaa gga gat gag 571
 Gln Gly Lys Asp Ser Ile Val Ser Val Gly Gln Pro Lys Gly Asp Glu
 105 110 115
 tac aag gac cgc aga gag ctg gag tca gag agg agg gct gat gag gag 619
 Tyr Lys Asp Arg Arg Glu Leu Glu Ser Glu Arg Arg Ala Asp Glu Glu
 120 125 130
 gag ctc gcc cag cag tat gag ctg ata atc caa gag tgt ggc cat ggc 667
 Glu Leu Ala Gln Gln Tyr Glu Leu Ile Ile Gln Glu Cys Gly His Gly

135	140	145	
cgt ttc cag tgg gcc ctt ttc ttc gtc ctg ggc atg gct ctc atg gca Arg Phe Gln Trp Ala Leu Phe Phe Val Leu Gly Met Ala Leu Met Ala 150 155 160			715
gac ggc gtg gag gtg ttt gtg gtg ggc ttt gtg tta ccc agt gca gag Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu Pro Ser Ala Glu 165 170 175 180			763
aca gac cta tgc ata ccg aat tca gga tct gga tgg cta ggc agc ata Thr Asp Leu Cys Ile Pro Asn Ser Gly Ser Gly Trp Leu Gly Ser Ile 185 190 195			811
gtg tac ctc ggg atg atg gtg ggg gcg ttc ttc tgg gga gga ctg gca Val Tyr Leu Gly Met Met Val Gly Ala Phe Phe Trp Gly Gly Leu Ala 200 205 210			859
gac aaa gtg gga agg aag cag tct ctt ctg att tgc atg tcc gtc aac Asp Lys Val Gly Arg Lys Gln Ser Leu Leu Ile Cys Met Ser Val Asn 215 220 225			907
gga ttc ttt gcc ttc ctt tct tca ttt gtc caa ggt tac ggc ttc ttt Gly Phe Phe Ala Phe Leu Ser Ser Phe Val Gln Gly Tyr Gly Phe Phe 230 235 240			955
ctc ctc tgt cgt ttg ctt tca gga ttc ggg att gga ggc gcc att ccc Leu Leu Cys Arg Leu Leu Ser Gly Phe Gly Ile Gly Gly Ala Ile Pro 245 250 255 260			1003
act gtg ttc tcc tac ttt gct gaa gtc ctg gcc cgg gag aag cgc ggt Thr Val Phe Ser Tyr Phe Ala Glu Val Leu Ala Arg Glu Lys Arg Gly 265 270 275			1051
gag cac ctc agt tgg ctc tgc atg ttc tgg atg att ggc ggt atc tat Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile Gly Gly Ile Tyr 280 285 290			1099
gct tca gcc atg gcc tgg gcc atc atc ccc cac tat ggg tgg agc ttc Ala Ser Ala Met Ala Trp Ala Ile Ile Pro His Tyr Gly Trp Ser Phe 295 300 305			1147
agc atg ggc tca gcc tac cag ttc cac agc tgg cgc gtc ttc gtc atc Ser Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg Val Phe Val Ile 310 315 320			1195
gtc tgt gcc ctc ccg tgc gtc tcc tcg gtg gtg gcc ctc acc ttc atg Val Cys Ala Leu Pro Cys Val Ser Ser Val Val Ala Leu Thr Phe Met 325 330 335 340			1243
ccc gaa agc cct cgg ttc ttg ctg gag gta gga aaa cat gat gaa gcc Pro Glu Ser Pro Arg Phe Leu Leu Glu Val Gly Lys His Asp Glu Ala 345 350 355			1291
tgg atg att ctg aag cta att cat gat acc aac atg aga gcc cgg ggc Trp Met Ile Leu Lys Leu Ile His Asp Thr Asn Met Arg Ala Arg Gly 360 365 370			1339
cag cca gag aag gtc ttc acg gta aat aaa atc aag act ccc aag caa Gln Pro Glu Lys Val Phe Thr Val Asn Lys Ile Lys Thr Pro Lys Gln 375 380 385			1387

ata gat gag ctg att gag att gag agc gac aca gga acc tgg tac cgg Ile Asp Glu Leu Ile Glu Ile Glu Ser Asp Thr Gly Thr Trp Tyr Arg 390 395 400	1435
agg tgt ttt gtt cgg atc cgc aca gaa ctg tac gga att tgg ttg act Arg Cys Phe Val Arg Ile Arg Thr Glu Leu Tyr Gly Ile Trp Leu Thr 405 410 415 420	1483
ttt atg aga tgc ttc aac tac ccg gtc agg gaa aac acc ata aag ctt Phe Met Arg Cys Phe Asn Tyr Pro Val Arg Glu Asn Thr Ile Lys Leu 425 430 435	1531
acg att gtt tgg ttc acc ctg tcc ttt ggg tac tat gga ctg tcc gtt Thr Ile Val Trp Phe Thr Leu Ser Phe Gly Tyr Tyr Gly Leu Ser Val 440 445 450	1579
tgg ttc cca gat gtc att aaa cac ctc cag tct gac gag tac gcc ctg Trp Phe Pro Asp Val Ile Lys His Leu Gln Ser Asp Glu Tyr Ala Leu 455 460 465	1627
ctg act cgg aat gtg cag aag gat aaa tat gca aac ttt agc att aac Leu Thr Arg Asn Val Gln Lys Asp Lys Tyr Ala Asn Phe Ser Ile Asn 470 475 480	1675
ttc acc atg gaa aac cag gtc cac acc gga atg gaa tat gac aat ggc Phe Thr Met Glu Asn Gln Val His Thr Gly Met Glu Tyr Asp Asn Gly 485 490 495 500	1723
agg ttc ctc gga gtc aaa ttc aaa tcg gta acc ttc aag gat tca gtg Arg Phe Leu Gly Val Lys Phe Lys Ser Val Thr Phe Lys Asp Ser Val 505 510 515	1771
ttt aag tcc tgc acc ttt gac gat gtg acc tca gtc aac acc tac ttc Phe Lys Ser Cys Thr Phe Asp Asp Val Thr Ser Val Asn Thr Tyr Phe 520 525 530	1819
aag aac tgc acg ttt att gat acc ctt ttt gag aac aca gat ttt gag Lys Asn Cys Thr Phe Ile Asp Thr Leu Phe Glu Asn Thr Asp Phe Glu 535 540 545	1867
ccc tat aaa ttc ata gac agc gag ttt caa aac tgc tcg ttt ctt cac Pro Tyr Lys Phe Ile Asp Ser Glu Phe Gln Asn Cys Ser Phe Leu His 550 555 560	1915
aat aag acg gga tgt cag att act ttt gac gac gac tac agt gcc tac Asn Lys Thr Gly Cys Gln Ile Thr Phe Asp Asp Asp Tyr Ser Ala Tyr 565 570 575 580	1963
tgg att tac ttt gtc aac ttt ctc ggg aca ttg gca gtg tta cca gga Trp Ile Tyr Phe Val Asn Phe Leu Gly Thr Leu Ala Val Leu Pro Gly 585 590 595	2011
aat atc gtg tct gct ctc ctg atg gac agg atc ggg cgc tta acg atg Asn Ile Val Ser Ala Leu Leu Met Asp Arg Ile Gly Arg Leu Thr Met 600 605 610	2059
cta ggt ggc tcc atg gtg ctc tcg ggg atc agc tgc ttc ttc ctg tgg Leu Gly Gly Ser Met Val Leu Ser Gly Ile Ser Cys Phe Phe Leu Trp 615 620 625	2107

ttt ggc acc agc gaa tcc atg atg ata ggc atg ctg tgc ttg tac aac 2155
 Phe Gly Thr Ser Glu Ser Met Met Ile Gly Met Leu Cys Leu Tyr Asn
 630 635 640

gga ctg acc atc tca gcg tgg aac tct ctt gat gta gtc acg gtg gaa 2203
 Gly Leu Thr Ile Ser Ala Trp Asn Ser Leu Asp Val Val Thr Val Glu
 645 650 655 660

cta tac ccc aca gac cgg aga gca acg ggc ttt ggc ttc ttg aac gca 2251
 Leu Tyr Pro Thr Asp Arg Arg Ala Thr Gly Phe Gly Phe Leu Asn Ala
 665 670 675

ctc tgt aaa gca gcg gcc gtc ctg gga aac tta ata ttc ggc tcc ttg 2299
 Leu Cys Lys Ala Ala Val Leu Gly Asn Leu Ile Phe Gly Ser Leu
 680 685 690

gtc agc atc acc aaa gca atc cct atc ctg ctg gct tcc acc gtg ctc 2347
 Val Ser Ile Thr Lys Ala Ile Pro Ile Leu Leu Ala Ser Thr Val Leu
 695 700 705

gtg tgt gga gga ctc gtg ggg ctg cgc ctg ccc gac aca aga acc cag 2395
 Val Cys Gly Gly Leu Val Gly Leu Arg Leu Pro Asp Thr Arg Thr Gln
 710 715 720

gtt ctg atg tga caaaagccat tctcttctct caccatgggt cagccctatt 2447
 Val Leu Met
 725

gcctgactca aggccttcaga gtttttatgt atagaaagggt ggccaagtat cagaactcaa 2507

acttttgctg tgacgtaaat gtagctgtgt attgtccccg ccagtgtgat ttgcagggtc 2567

ctccccctcc cccgcgcctt gttatctttt cctaattgtg atgttcctgc ttccg 2622

<210> 14
 <211> 727
 <212> PRT
 <213> Rattus norvegicus

<400> 14
 Met Glu Asp Ser Tyr Lys Asp Arg Thr Ser Leu Met Lys Gly Ala Lys
 1 5 10 15

Asp Ile Ala Lys Glu Val Lys Lys Gln Thr Val Lys Lys Val Asn Gln
 20 25 30

Ala Val Asp Arg Ala Gln Asp Glu Tyr Thr Gln Arg Ser Tyr Ser Arg
 35 40 45

Phe Gln Asp Glu Asp Asp Asp Asp Tyr Tyr Pro Pro Gly Glu Thr
 50 55 60

Tyr Ser Gly Glu Ala Asn Asp Asp Glu Gly Ser Ser Glu Ala Thr Glu
 65 70 75 80

Gly His Asp Glu Glu Asp Glu Ile Tyr Glu Gly Glu Tyr Gln Gly Ile
 85 90 95

Pro Ser Thr Asn Gln Gly Lys Asp Ser Ile Val Ser Val Gly Gln Pro
 100 105 110

Lys Gly Asp Glu Tyr Lys Asp Arg Arg Glu Leu Glu Ser Glu Arg Arg
 115 120 125
 Ala Asp Glu Glu Glu Leu Ala Gln Gln Tyr Glu Leu Ile Ile Gln Glu
 130 135 140
 Cys Gly His Gly Arg Phe Gln Trp Ala Leu Phe Phe Val Leu Gly Met
 145 150 155 160
 Ala Leu Met Ala Asp Gly Val Glu Val Phe Val Val Gly Phe Val Leu
 165 170 175
 Pro Ser Ala Glu Thr Asp Leu Cys Ile Pro Asn Ser Gly Ser Gly Trp
 180 185 190
 Leu Gly Ser Ile Val Tyr Leu Gly Met Met Val Gly Ala Phe Phe Trp
 195 200 205
 Gly Gly Leu Ala Asp Lys Val Gly Arg Lys Gln Ser Leu Leu Ile Cys
 210 215 220
 Met Ser Val Asn Gly Phe Phe Ala Phe Leu Ser Ser Phe Val Gln Gly
 225 230 235 240
 Tyr Gly Phe Phe Leu Leu Cys Arg Leu Leu Ser Gly Phe Gly Ile Gly
 245 250 255
 Gly Ala Ile Pro Thr Val Phe Ser Tyr Phe Ala Glu Val Leu Ala Arg
 260 265 270
 Glu Lys Arg Gly Glu His Leu Ser Trp Leu Cys Met Phe Trp Met Ile
 275 280 285
 Gly Gly Ile Tyr Ala Ser Ala Met Ala Trp Ala Ile Ile Pro His Tyr
 290 295 300
 Gly Trp Ser Phe Ser Met Gly Ser Ala Tyr Gln Phe His Ser Trp Arg
 305 310 315 320
 Val Phe Val Ile Val Cys Ala Leu Pro Cys Val Ser Ser Val Val Ala
 325 330 335
 Leu Thr Phe Met Pro Glu Ser Pro Arg Phe Leu Leu Glu Val Gly Lys
 340 345 350
 His Asp Glu Ala Trp Met Ile Leu Lys Leu Ile His Asp Thr Asn Met
 355 360 365
 Arg Ala Arg Gly Gln Pro Glu Lys Val Phe Thr Val Asn Lys Ile Lys
 370 375 380
 Thr Pro Lys Gln Ile Asp Glu Leu Ile Glu Ile Glu Ser Asp Thr Gly
 385 390 395 400
 Thr Trp Tyr Arg Arg Cys Phe Val Arg Ile Arg Thr Glu Leu Tyr Gly
 405 410 415
 Ile Trp Leu Thr Phe Met Arg Cys Phe Asn Tyr Pro Val Arg Glu Asn
 420 425 430

39/44

Thr Ile Lys Leu Thr Ile Val Trp Phe Thr Leu Ser Phe Gly Tyr Tyr
 435 440 445
 Gly Leu Ser Val Trp Phe Pro Asp Val Ile Lys His Leu Gln Ser Asp
 450 455 460
 Glu Tyr Ala Leu Leu Thr Arg Asn Val Gln Lys Asp Lys Tyr Ala Asn
 465 470 475 480
 Phe Ser Ile Asn Phe Thr Met Glu Asn Gln Val His Thr Gly Met Glu
 485 490 495
 Tyr Asp Asn Gly Arg Phe Leu Gly Val Lys Phe Lys Ser Val Thr Phe
 500 505 510
 Lys Asp Ser Val Phe Lys Ser Cys Thr Phe Asp Asp Val Thr Ser Val
 515 520 525
 Asn Thr Tyr Phe Lys Asn Cys Thr Phe Ile Asp Thr Leu Phe Glu Asn
 530 535 540
 Thr Asp Phe Glu Pro Tyr Lys Phe Ile Asp Ser Glu Phe Gln Asn Cys
 545 550 555 560
 Ser Phe Leu His Asn Lys Thr Gly Cys Gln Ile Thr Phe Asp Asp Asp
 565 570 575
 Tyr Ser Ala Tyr Trp Ile Tyr Phe Val Asn Phe Leu Gly Thr Leu Ala
 580 585 590
 Val Leu Pro Gly Asn Ile Val Ser Ala Leu Leu Met Asp Arg Ile Gly
 595 600 605
 Arg Leu Thr Met Leu Gly Gly Ser Met Val Leu Ser Gly Ile Ser Cys
 610 615 620
 Phe Phe Leu Trp Phe Gly Thr Ser Glu Ser Met Met Ile Gly Met Leu
 625 630 635 640
 Cys Leu Tyr Asn Gly Leu Thr Ile Ser Ala Trp Asn Ser Leu Asp Val
 645 650 655
 Val Thr Val Glu Leu Tyr Pro Thr Asp Arg Arg Ala Thr Gly Phe Gly
 660 665 670
 Phe Leu Asn Ala Leu Cys Lys Ala Ala Ala Val Leu Gly Asn Leu Ile
 675 680 685
 Phe Gly Ser Leu Val Ser Ile Thr Lys Ala Ile Pro Ile Leu Leu Ala
 690 695 700
 Ser Thr Val Leu Val Cys Gly Gly Leu Val Gly Leu Arg Leu Pro Asp
 705 710 715 720
 Thr Arg Thr Gln Val Leu Met
 725

<210> 15
 <211> 1647
 <212> DNA

<213> Rattus norvegicus

<220>

<221> CDS

<222> (1)..(1647)

<223>

<400> 15

atg gag gag gac ctg ttc cag ctc agg cag ttg ccg gtg gtg aaa ttc	48
Met Glu Glu Asp Leu Phe Gln Leu Arg Gln Leu Pro Val Val Lys Phe	
1 5 10 15	
cgc cgc aca gga gag agc gca cgg tca gag gac gac gcg gct tcc ggg	96
Arg Arg Thr Gly Glu Ser Ala Arg Ser Glu Asp Asp Ala Ala Ser Gly	
20 25 30	
gaa cat gat gtt cag att gag ggg gtc cga gtg ggc cta gaa gct gtc	144
Glu His Asp Val Gln Ile Glu Gly Val Arg Val Gly Leu Glu Ala Val	
35 40 45	
gag ctg gat gat gga gca gct gtc ccc aag gag ttt gcc aat ccc act	192
Glu Leu Asp Asp Gly Ala Val Pro Lys Glu Phe Ala Asn Pro Thr	
50 55 60	
gat gac act ttc atg gtc gaa gat gcg gtg gaa gcc att ggg ttc gga	240
Asp Asp Thr Phe Met Val Glu Asp Ala Val Glu Ala Ile Gly Phe Gly	
65 70 75 80	
aga ttc cag tgg aag ctc tct gtt ctc acc ggc ttg gct tgg atg gcg	288
Arg Phe Gln Trp Lys Leu Ser Val Leu Thr Gly Leu Ala Trp Met Ala	
85 90 95	
gac gcc atg gag atg atg att ctg agc atc ctg gcg cct cag ctg cac	336
Asp Ala Met Glu Met Met Ile Leu Ser Ile Leu Ala Pro Gln Leu His	
100 105 110	
tgc gag tgg cga ctc ccc agc tgg cag gtg gcg ctg ctg act tcg gtg	384
Cys Glu Trp Arg Leu Pro Ser Trp Gln Val Ala Leu Leu Thr Ser Val	
115 120 125	
gtc ttc att ggt atg atg tcc agt tct acg ctc tgg gga aac atc tcg	432
Val Phe Ile Gly Met Met Ser Ser Ser Thr Leu Trp Gly Asn Ile Ser	
130 135 140	
gat cag tat ggc agg aaa aca ggg ctg aag atc agt gtg ttc tgg acc	480
Asp Gln Tyr Gly Arg Lys Thr Gly Leu Lys Ile Ser Val Phe Trp Thr	
145 150 155 160	
ctg tac tac ggc atc ctc agc gct ttc gcg cca gtg tat agc tgg atc	528
Leu Tyr Tyr Gly Ile Leu Ser Ala Phe Ala Pro Val Tyr Ser Trp Ile	
165 170 175	
ctg gtg ctc cga ggc ctc gtg ggc ttt ggg att gga ggg gtg cct cag	576
Leu Val Leu Arg Gly Leu Val Gly Phe Gly Ile Gly Gly Val Pro Gln	
180 185 190	
tcg gtg acc ctg tac gcc gag ttc ctc ccc atg aag gcc aga gcc aag	624
Ser Val Thr Leu Tyr Ala Glu Phe Leu Pro Met Lys Ala Arg Ala Lys	
195 200 205	
tgc att ttg ctg att gag gtt ttc tgg gcc atc ggg acc gtg ttc gag	672

Cys	Ile	Leu	Leu	Ile	Glu	Val	Phe	Trp	Ala	Ile	Gly	Thr	Val	Phe	Glu	
210						215					220					
gtg	ctt	ctg	gct	gtg	ttt	gtg	atg	ccc	agc	ctg	ggc	tgg	cgc	tgg	ctg	720
Val	Leu	Leu	Ala	Val	Phe	Val	Met	Pro	Ser	Leu	Gly	Trp	Arg	Trp	Leu	
225					230					235					240	
ctg	ctg	ctg	tgc	gcc	gct	cca	cta	ctt	gtc	ttt	gct	gtt	ctg	tgt	ttc	768
Leu	Leu	Leu	Ser	Ala	Ala	Pro	Leu	Leu	Val	Phe	Ala	Val	Leu	Cys	Phe	
				245					250					255		
tgg	ctg	cca	gag	agt	gct	agg	tac	gat	gtg	ctg	tct	ggg	aac	cag	gaa	816
Trp	Leu	Pro	Glu	Ser	Ala	Arg	Tyr	Asp	Val	Leu	Ser	Gly	Asn	Gln	Glu	
			260					265					270			
aag	gcg	att	gct	acc	tta	aag	cgg	atc	gca	aca	gaa	aat	gga	gcc	ccc	864
Lys	Ala	Ile	Ala	Thr	Leu	Lys	Arg	Ile	Ala	Thr	Glu	Asn	Gly	Ala	Pro	
		275					280					285				
atg	cct	ctg	ggg	aag	ctc	atc	atc	tcc	aga	cag	gaa	gac	cga	ggc	aaa	912
Met	Pro	Leu	Gly	Lys	Leu	Ile	Ile	Ser	Arg	Gln	Glu	Asp	Arg	Gly	Lys	
	290					295					300					
atg	agg	gac	ctt	ttc	aca	ccc	cac	ttt	cgt	tgg	aca	act	ctg	ctg	ctg	960
Met	Arg	Asp	Leu	Phe	Thr	Pro	His	Phe	Arg	Trp	Thr	Thr	Leu	Leu	Leu	
305					310					315					320	
tgg	ttt	ata	tgg	ttc	tcc	aat	gcc	ttc	tct	tat	tac	ggc	ttg	gtt	ctg	1008
Trp	Phe	Ile	Trp	Phe	Ser	Asn	Ala	Phe	Ser	Tyr	Tyr	Gly	Leu	Val	Leu	
				325					330					335		
ctc	acc	aca	gaa	ctc	ttc	cag	gcc	gga	gat	gtt	tgc	agc	atc	tcc	agc	1056
Leu	Thr	Thr	Glu	Leu	Phe	Gln	Ala	Gly	Asp	Val	Cys	Ser	Ile	Ser	Ser	
			340					345					350			
cgg	aag	aag	gcg	gtg	gaa	gcc	aaa	tgc	agc	ctg	gct	tgt	gag	tac	ctc	1104
Arg	Lys	Lys	Ala	Val	Glu	Ala	Lys	Cys	Ser	Leu	Ala	Cys	Glu	Tyr	Leu	
		355					360					365				
agc	aaa	gag	gat	tac	atg	gac	ctg	ctg	tgg	acc	acc	ctg	tct	gag	ttc	1152
Ser	Lys	Glu	Asp	Tyr	Met	Asp	Leu	Leu	Trp	Thr	Thr	Leu	Ser	Glu	Phe	
	370					375					380					
cca	ggt	gtc	ctt	gtg	act	ctg	tgg	gtc	atc	gac	cgc	ctg	ggc	cgc	aag	1200
Pro	Gly	Val	Leu	Val	Thr	Leu	Trp	Val	Ile	Asp	Arg	Leu	Gly	Arg	Lys	
385					390					395					400	
aag	acc	atg	gct	ctg	tgt	ttc	gtc	atc	ttt	tcc	ctc	tgc	agc	ctc	ctg	1248
Lys	Thr	Met	Ala	Leu	Cys	Phe	Val	Ile	Phe	Ser	Leu	Cys	Ser	Leu	Leu	
				405					410					415		
ctg	ttc	atc	tgc	att	gga	aga	aat	gtg	cta	acc	ctc	tta	ctg	ttc	att	1296
Leu	Phe	Ile	Cys	Ile	Gly	Arg	Asn	Val	Leu	Thr	Leu	Leu	Leu	Phe	Ile	
			420					425					430			
gca	aga	gcg	ttt	att	tct	gga	ggc	ttc	caa	gca	gcc	tac	gtt	tac	acg	1344
Ala	Arg	Ala	Phe	Ile	Ser	Gly	Gly	Phe	Gln	Ala	Ala	Tyr	Val	Tyr	Thr	
		435					440					445				
cct	gag	gtg	tat	cca	acg	gcg	acg	agg	gcg	ctg	ggc	ctg	ggc	acc	tgc	1392
Pro	Glu	Val	Tyr	Pro	Thr	Ala	Thr	Arg	Ala	Leu	Gly	Leu	Gly	Thr	Cys	

450	455	460	
agc ggc atg gcg aga gtg ggc gcg ctc atc act cca ttc ata gct cag			1440
Ser Gly Met Ala Arg Val Gly Ala Leu Ile Thr Pro Phe Ile Ala Gln			
465	470	475	480
gtg atg ctg gaa tct tcc gtg tac ctg acc ctg gcc gtc tac agt ggc			1488
Val Met Leu Glu Ser Ser Val Tyr Leu Thr Leu Ala Val Tyr Ser Gly			
	485	490	495
tgc tgc ctc ctt gct gcc ttg gcc tcc tgc ttt ctg ccc atc gag acc			1536
Cys Cys Leu Leu Ala Ala Leu Ala Ser Cys Phe Leu Pro Ile Glu Thr			
	500	505	510
aaa ggc cga gca ctg cag gag tcc agc cac cgg gag tgg ggc cag gag			1584
Lys Gly Arg Ala Leu Gln Glu Ser Ser His Arg Glu Trp Gly Gln Glu			
	515	520	525
atg gtt ggc cga ggg aca aac agc aca ggc gtc ccc agg tcg aac tct			1632
Met Val Gly Arg Gly Thr Asn Ser Thr Gly Val Pro Arg Ser Asn Ser			
	530	535	540
ggc tct cag gag tag			1647
Gly Ser Gln Glu			
545			

<210> 16
 <211> 548
 <212> PRT
 <213> Rattus norvegicus

<400> 16
 Met Glu Glu Asp Leu Phe Gln Leu Arg Gln Leu Pro Val Val Lys Phe
 1 5 10 15

Arg Arg Thr Gly Glu Ser Ala Arg Ser Glu Asp Asp Ala Ala Ser Gly
 20 25 30

Glu His Asp Val Gln Ile Glu Gly Val Arg Val Gly Leu Glu Ala Val
 35 40 45

Glu Leu Asp Asp Gly Ala Ala Val Pro Lys Glu Phe Ala Asn Pro Thr
 50 55 60

Asp Asp Thr Phe Met Val Glu Asp Ala Val Glu Ala Ile Gly Phe Gly
 65 70 75 80

Arg Phe Gln Trp Lys Leu Ser Val Leu Thr Gly Leu Ala Trp Met Ala
 85 90 95

Asp Ala Met Glu Met Met Ile Leu Ser Ile Leu Ala Pro Gln Leu His
 100 105 110

Cys Glu Trp Arg Leu Pro Ser Trp Gln Val Ala Leu Leu Thr Ser Val
 115 120 125

Val Phe Ile Gly Met Met Ser Ser Ser Thr Leu Trp Gly Asn Ile Ser
 130 135 140

Asp Gln Tyr Gly Arg Lys Thr Gly Leu Lys Ile Ser Val Phe Trp Thr

145	150	155	160
Leu Tyr Tyr Gly Ile Leu Ser Ala Phe Ala Pro Val Tyr Ser Trp Ile	165	170	175
Leu Val Leu Arg Gly Leu Val Gly Phe Gly Ile Gly Gly Val Pro Gln	180	185	190
Ser Val Thr Leu Tyr Ala Glu Phe Leu Pro Met Lys Ala Arg Ala Lys	195	200	205
Cys Ile Leu Leu Ile Glu Val Phe Trp Ala Ile Gly Thr Val Phe Glu	210	215	220
Val Leu Leu Ala Val Phe Val Met Pro Ser Leu Gly Trp Arg Trp Leu	225	230	235
Leu Leu Leu Ser Ala Ala Pro Leu Leu Val Phe Ala Val Leu Cys Phe	245	250	255
Trp Leu Pro Glu Ser Ala Arg Tyr Asp Val Leu Ser Gly Asn Gln Glu	260	265	270
Lys Ala Ile Ala Thr Leu Lys Arg Ile Ala Thr Glu Asn Gly Ala Pro	275	280	285
Met Pro Leu Gly Lys Leu Ile Ile Ser Arg Gln Glu Asp Arg Gly Lys	290	295	300
Met Arg Asp Leu Phe Thr Pro His Phe Arg Trp Thr Thr Leu Leu Leu	305	310	315
Trp Phe Ile Trp Phe Ser Asn Ala Phe Ser Tyr Tyr Gly Leu Val Leu	325	330	335
Leu Thr Thr Glu Leu Phe Gln Ala Gly Asp Val Cys Ser Ile Ser Ser	340	345	350
Arg Lys Lys Ala Val Glu Ala Lys Cys Ser Leu Ala Cys Glu Tyr Leu	355	360	365
Ser Lys Glu Asp Tyr Met Asp Leu Leu Trp Thr Thr Leu Ser Glu Phe	370	375	380
Pro Gly Val Leu Val Thr Leu Trp Val Ile Asp Arg Leu Gly Arg Lys	385	390	395
Lys Thr Met Ala Leu Cys Phe Val Ile Phe Ser Leu Cys Ser Leu Leu	405	410	415
Leu Phe Ile Cys Ile Gly Arg Asn Val Leu Thr Leu Leu Leu Phe Ile	420	425	430
Ala Arg Ala Phe Ile Ser Gly Gly Phe Gln Ala Ala Tyr Val Tyr Thr	435	440	445
Pro Glu Val Tyr Pro Thr Ala Thr Arg Ala Leu Gly Leu Gly Thr Cys	450	455	460
Ser Gly Met Ala Arg Val Gly Ala Leu Ile Thr Pro Phe Ile Ala Gln	465	470	475
			480

Val Met Leu Glu Ser Ser Val Tyr Leu Thr Leu Ala Val Tyr Ser Gly .
485 490 495

Cys Cys Leu Leu Ala Ala Leu Ala Ser Cys Phe Leu Pro Ile Glu Thr
500 505 510

Lys Gly Arg Ala Leu Gln Glu Ser Ser His Arg Glu Trp Gly Gln Glu
515 520 525

Met Val Gly Arg Gly Thr Asn Ser Thr Gly Val Pro Arg Ser Asn Ser
530 535 540

Gly Ser Gln Glu
545